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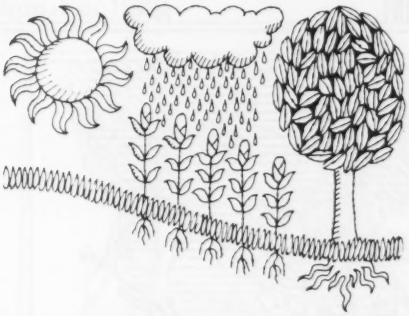

WEEKLY WEATHER AND CROP BULLETIN

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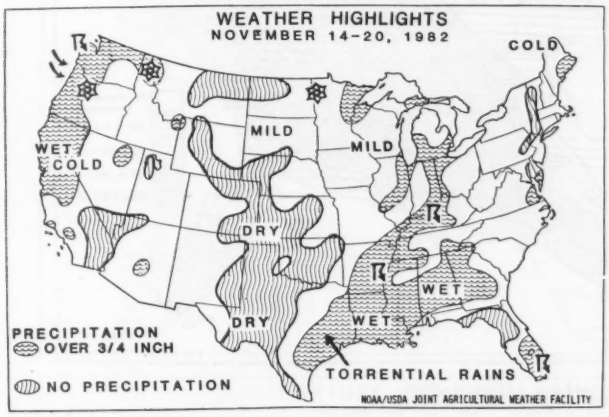
U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service and World Agricultural Outlook Board

Volume 69, No. 47 WASHINGTON, D.C. Nov. 23, 1982

National Weather Summary

November 14 to 20



HIGHLIGHTS . . . Very heavy rains during 5 consecutive days drenched most of the gulf coast as a frontal wave remained off shore. Torrential amounts of 5 to 6½ inches over parts of southeast Texas caused minor flooding. In contrast, most of Great Plains was dry. Prolonged dryness is causing a critical shortage of soil moisture in the winter wheatlands of the southern Plains. Temperatures averaged unseasonably warm over parts of the northern Plains into the Great Lakes, while the west coast remained cooler than usual. A storm moved across the northern Rockies and Plains late in the week, bringing snow, blustery winds, and cold in its wake. Rains persisted along the Pacific Northwest coast for 6 consecutive days.

SUNDAY . . . Chilly weather covered most of the Nation during the morning under large high-pressure systems over the East and West. However, abundant sunshine pushed temperatures upward, generally 15 to 20 degrees, to a more pleasant level by afternoon. A low-pressure cold frontal system stretching from the Great Lakes into Texas produced a few snow showers around the Lakes and generated cloudiness as it moved eastward.

MONDAY . . . The cold front moving through the East gathered enough moisture to produce more precipitation as it reached the coast. Rain fell along most of the coast, while light snow dotted the Great Lakes into northern New England. High pressure kept the rest of the country generally fair. Afternoon temperatures ranged from the sixties amd seventies over the extreme Southern States to the thirties and forties in the Northern tier.

TUESDAY . . . Skies were clear over most of the East under a large high-pressure cell. In contrast, rain continued in frontal zones across the southern tips of Florida and Texas and over the Pacific Northwest. Locally heavy rains drenched Florida's southeastern coast where almost 4 inches fell in northern West Palm Beach. Cloudiness and light rain began to spread rapidly through East Texas and the desert Southwest late in the day.

WEDNESDAY . . . Cloudiness and rain continued to spread over most of the Southeastern quarter of the Nation ahead of a very active frontal wave. Precipitation was also widespread across New Mexico, Arizona, and the Pacific Northwest. The heaviest amounts--2 to 3 inches--doused central Alabama, while 1 to 2 inches fell in northern California. Temperatures moderated some as a fair weather, high-pressure system persisted along the mid-Atlantic coast, while the rainy low-pressure system moved inland along the Pacific Northwest coast.

THURSDAY . . . Cloudiness and precipitation became very extensive, covering all of the country except New England and the western part of the Great Plains. A frontal wave along the gulf coast and low-pressure systems with trailing fronts over the west generated the gloomy, wet pattern. High pressure continuing over the Northeast moderated temperatures and prevented cloudiness. Balmy 80-degree readings were reached across southern parts of Florida and Texas.

FRIDAY . . . The gulf coast wave and warm front and a complex low-pressure system in the West caused precipitation to continue over most of the country. Torrential rains of 5 to 6½ inches were dumped over parts of southeastern Texas from near Victoria to College Station, causing minor flooding in several sections. A low-pressure

(continued on back cover)

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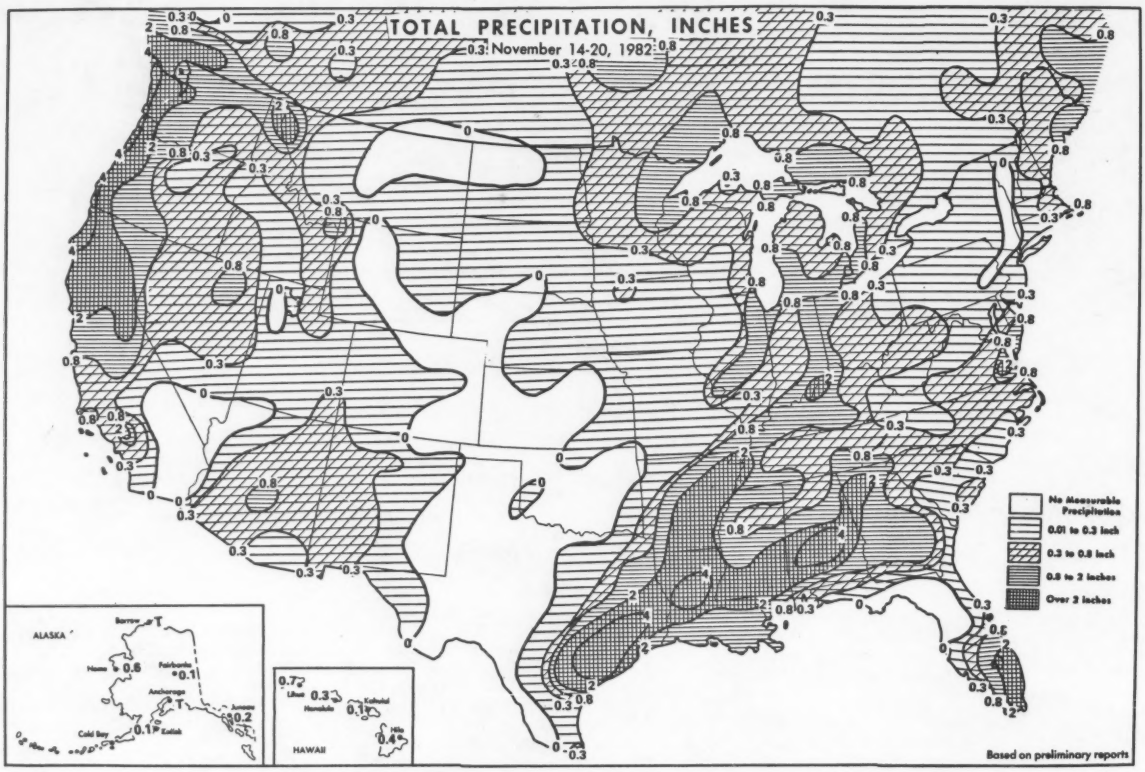


November Crop Production Highlights

CORN FOR GRAIN production forecast at record high 8.33 billion bushels (212 million metric tons)--up 2 percent from previous high set in 1981. The 90 percent confidence interval for this 1982 production forecast is 7.95 to 8.70 billion bushels.

SORGHUM GRAIN production forecast at 826 million bushels (21.0 million metric tons), down 6 percent from a year earlier.

FEED GRAIN production (corn, sorghum, oats, and barley) expected to total 252 million metric tons, up 2 percent from last year.

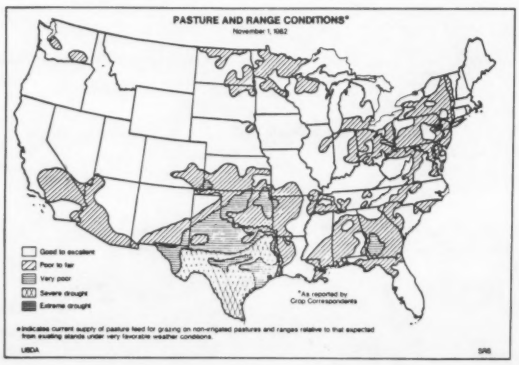
SOYBEAN production forecast at record high 2.30 billion bushels (62.6 million metric tons), virtually unchanged from October 1, 15 percent above the 1981 crop. The 90 percent confidence interval for the 1982 production forecast is 2.20 to 2.40 billion bushels.

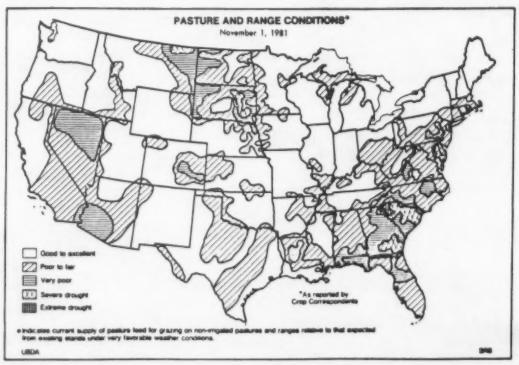
OILSEED production (soybeans, cottonseed, peanuts, flaxseed, sunflowers) forecast at 71.2 million metric tons, up 11 percent from last year.

ALL COTTON production forecast at 11.9 million bales, 24 percent below 1981 production, up 5 percent from October 1 forecast. The 90 percent confidence interval for this 1982 forecast is 11.2 to 12.7 million bales.

SUGAR CROPS: Sugarbeet production forecast at 21.7 million tons (19.7 million metric tons), down 21 percent from last year. Sugarcane for sugar

(continued on back cover)


PASTURE AND RANGE CONDITIONS*
November 1, 1982
Good to excellent
Poor to fair
Very poor
Severe drought
Extreme drought
*As reported by Crop Correspondents
*Indicates current supply of pasture feed for grazing on non-irrigated pastures and ranges relative to that expected from existing stands under very favorable weather conditions.
USDA
SRS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November 1, 1981
Good to excellent
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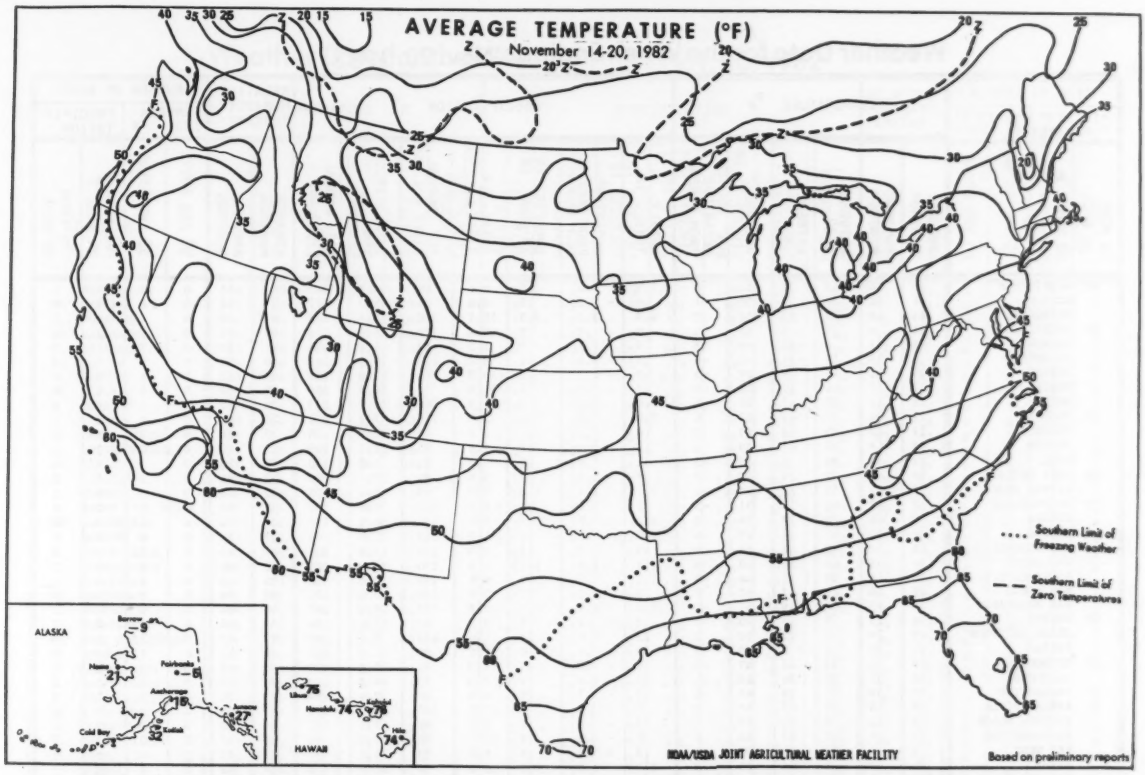
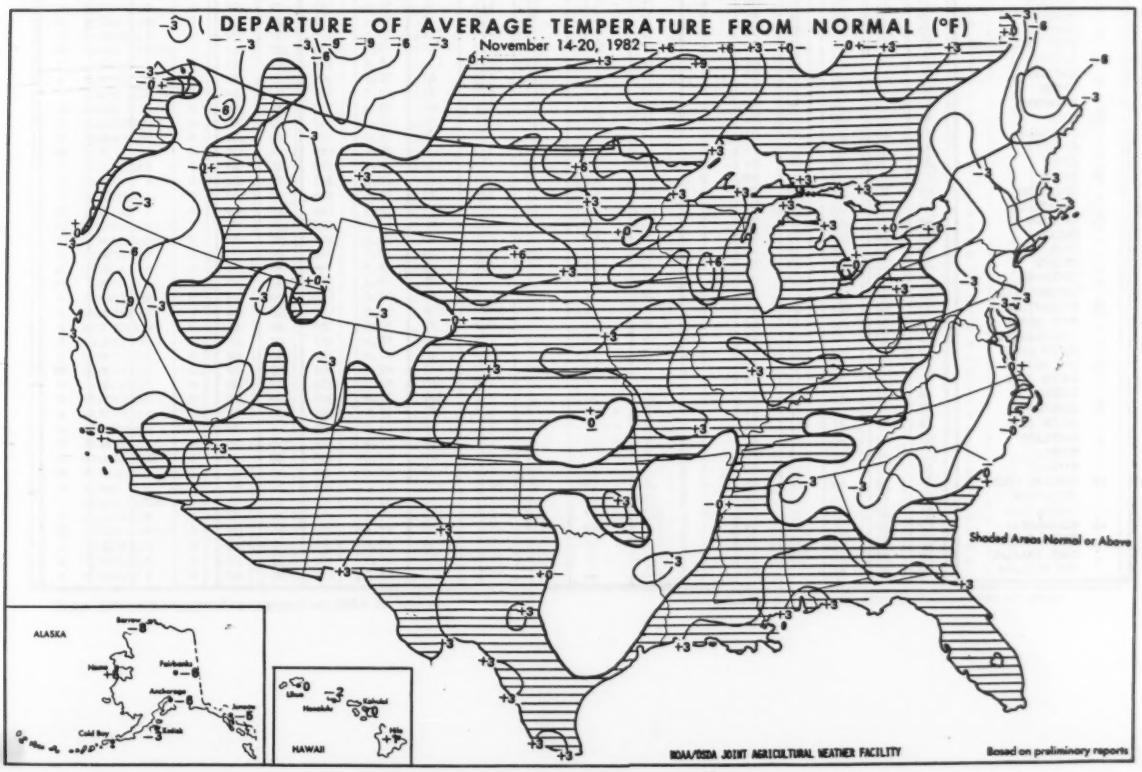
SRS


AVERAGE TEMPERATURE (°F)
November 14-20, 1982
Southern Limit of Freezing Weather
Southern Limit of Zero Temperatures
ALASKA
HAWAII
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
November 14-20, 1982
Shaded Areas Normal or Above
ALASKA
HAWAII
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Weather Data for the Week Ending Nov. 20, 1982

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Aug. 29	PCT. NORMAL SINCE Aug. 29	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	58	44	63	30	51	0	1.5	.6	1.0	6.5	64	56.7	125	87	61	0	2	3	1
MOBILE	68	51	74	33	59	1	.6	- .3	.5	8.8	65	65.0	112	86	62	0	0	2	1
MONTGOMERY	65	48	69	32	57	2	4.0	3.2	2.3	10.1	100	55.5	132	81	58	0	1	3	2
AK ANCHORAGE	21	8	35	-3	15	-6	T	- .2	T	10.0	175	16.9	126	97	75	0	7	2	0
BARROW	-6	-12	0	-18	-9	-8	T	- .1	T	1.3	62	4.6	94	81	69	0	7	1	0
FAIRBANKS	4	-15	20	-31	-5	-6	.1	- .1	T	3.7	137	12.0	115	80	57	0	7	2	0
JUNEAU	32	21	44	9	27	-5	.2	- 1.1	.2	14.7	64	41.3	87	81	52	0	6	2	0
KODIAK	37	27	44	19	32	-3	.1	- 1.2	.1	14.4	75	50.9	104	85	58	0	5	1	0
NOME	28	14	35	-7	21	6	.6	.4	.3	7.9	141	17.7	115	84	67	0	7	6	0
AZ PHOENIX	71	54	77	45	63	4	1.0	.8	.8	2.0	118	7.7	131	88	42	0	0	2	1
PRESCOTT	57	38	63	28	47	2	.4	.1	.4	1.8	49	11.9	75	72	36	0	2	2	0
TUCSON	69	49	77	46	59	1	.2	.1	.2	2.6	93	11.3	116	83	42	0	0	2	0
YUMA	73	47	80	5	60	-3	.1	.1	.1	.2	20	3.0	130	56	27	0	1	1	0
AR FORT SMITH	58	40	77	20	49	0	T	- .7	T	5.6	51	37.7	100	91	56	0	3	1	0
LITTLE ROCK	57	42	75	25	50	-1	2.1	1.1	1.8	7.5	69	48.1	118	92	68	0	3	4	1
CA BAKERSFIELD	58	43	66	36	51	-5	.2	.1	.2	2.1	300	6.6	150	99	69	0	0	1	0
EUREKA	61	46	75	38	54	2	4.2	2.8	1.9	9.8	114	34.6	115	88	68	0	0	5	3
FRESNO	54	43	62	38	49	-4	1.0	.7	.9	4.2	263	12.8	166	97	71	0	0	2	1
LOS ANGELES	68	54	73	46	61	1	.5	0	.3	3.3	206	11.9	131	84	45	0	0	2	0
RED BLUFF	54	39	60	36	47	-6	1.8	1.0	1.1	5.4	150	19.0	115	98	64	0	0	3	2
SACRAMENTO	50	39	59	35	44	-8	1.2	.7	.7	5.5	196	23.6	166	100	79	0	0	2	2
SAN DIEGO	69	56	71	47	62	2	.2	- .2	.2	1.9	158	10.9	160	82	51	0	0	1	0
SAN FRANCISCO	57	45	60	39	51	-4	2.5	1.9	2.3	5.8	223	28.4	207	84	61	0	0	2	1
CO DENVER	56	23	63	12	40	1	T	- .2	T	3.3	92	12.0	86	71	18	0	6	0	0
GRAND JUNCTION	49	29	56	23	39	0	.2	0	.2	4.0	133	8.0	105	89	43	0	5	1	0
PUEBLO	61	20	69	9	40	0	0	- .1	0	2.1	88	14.8	131	76	21	0	7	0	0
CT BRIDGEPORT	49	36	53	26	42	-3	.1	- .8	.1	4.3	44	40.2	120	78	46	0	2	1	0
HARTFORD	48	31	52	24	40	-1	.1	- 1.0	T	8.3	73	46.2	126	78	41	0	5	2	0
DC WASHINGTON	53	38	61	29	46	-2	T	- .7	T	4.8	52	32.4	94	78	50	0	1	1	0
FL APALACHICOLA	69	55	75	45	62	2	0	- .7	0	23.9	145	65.9	127	87	68	0	0	0	0
DAYTONA BEACH	75	62	79	60	68	4	.1	- .3	.1	8.2	46	47.3	101	89	60	0	0	2	0
JACKSONVILLE	72	54	78	41	63	2	T	- .3	T	13.7	80	47.9	94	98	67	0	0	1	0
KEY WEST	79	71	81	68	75	1	.3	- .3	.2	9.8	53	36.2	97	89	71	0	0	2	0
MIAMI	82	68	83	66	75	3	2.2	1.6	1.8	22.8	94	66.1	116	99	62	0	0	6	1
ORLANDO	79	61	84	51	70	4	T	- .3	T	8.3	54	50.6	105	96	56	0	0	0	0
TALLAHASSEE	75	54	81	36	65	6	T	- .7	T	9.9	72	54.4	98	88	56	0	0	0	0
TAMPA	78	62	82	53	70	4	T	- .4	T	14.3	116	54.5	119	97	62	0	0	1	0
WEST PALM BEACH	81	69	83	65	75	4	2.7	2.3	2.5	25.7	99	79.0	135	87	61	0	0	4	1
GA ATLANTA	54	42	57	33	48	-3	1.2	.3	.6	11.1	116	48.9	116	88	65	0	0	3	2
AUGUSTA	64	42	70	29	53	-1	.1	- .4	.1	7.5	89	35.6	93	87	53	0	2	3	0
MACON	62	47	65	32	55	0	1.2	.7	1.2	6.8	80	40.8	107	92	66	0	1	2	1
SAVANNAH	67	50	72	36	58	2	.1	- .4	.1	5.0	42	48.4	103	86	59	0	0	1	0
HI HILO	80	68	82	66	74	1	.4	- 2.9	.3	24.7	75	162.0	147	87	65	0	0	5	0
HONOLULU	79	69	81	67	74	-2	.3	- .5	.3	7.3	159	31.0	176	84	62	0	0	1	0
KAHULUI	82	69	85	67	76	0	.1	- .5	T	3.3	103	26.4	186	82	54	0	0	2	0
LIHUE	80	70	82	66	75	0	.7	- .7	.6	16.3	150	68.5	199	85	65	0	0	3	1
ID BOISE	48	30	52	20	39	0	.5	.2	.3	3.9	163	11.4	115	88	51	0	4	5	0
LEWISTON	47	32	56	22	39	0	.3	- .1	.1	2.7	82	11.6	105	92	61	0	3	3	0
POCATELLO	45	25	51	15	35	0	.4	.2	.4	5.3	265	15.1	164	87	48	0	5	2	0
IL CHICAGO	48	28	66	13	38	0	1.3	.8	.9	8.3	98	35.0	120	94	63	0	5	2	1
MOLINE	49	29	69	15	39	1	.1	- .3	.1	8.2	85	38.0	118	82	56	0	5	2	0
PEORIA	50	33	69	16	42	2	.2	- .3	.2	6.6	69	38.4	120	82	56	0	4	2	0
QUINCY	50	32	67	19	41	1	.2	- .3	.1	8.8	82	39.0	--	86	63	0	4	2	0
ROCKFORD	47	27	66	13	37	0	.1	- .4	.1	8.7	84	39.2	117	91	65	0	5	3	0
SPRINGFIELD	51	34	70	17	43	2	.4	- .1	.2	9.5	98	33.8	108	78	56	0	4	3	0
IN EVANSVILLE	55	40	65	24	48	3	.8	.1	.7	10.4	116	41.9	114	78	54	0	3	3	1
FORT WAYNE	49	36	62	23	42	3	.8	.2	.5	7.0	79	37.1	116	86	61	0	4	2	0
INDIANAPOLIS	51	35	60	19	43	2	.4	- .4	.2	4.5	50	34.2	101	87	60	0	4	2	0
SOUTH BEND	48	34	61	22	41	2	.7	.1	.5	6.7	68	35.7	112	89	61	0	5	2	1
IA DES MOINES	51	30	63	16	40	4	.1	- .3	.1	10.2	138	40.6	144	83	47	0	4	2	0
SIOUX CITY	47	26	54	16	36	1	.1	- .1	.1	9.9	165	28.0	114	93	55	0	6	2	0
WATERLOO	48	26	61	13	37	3	.1	- .2	.1	9.2	101	31.3	101	90	60	0	5	3	0
KS CONCORDIA	52	30	69	20	41	1	T	- .2	T	3.5	51	35.0	135	84	41	0	4	0	0
DODGE CITY	58	31	73	21	44	2	0	- .1	0	2.1	44	18.0	94	70	26	0	4	0	0
GOODLAND	55	25	72	17	40	2	T	- .1	T	4.4	119	24.8	157	75	25	0	7	0	0
TOPEKA	53	31	68	18	42	0	T	- .2	T	3.6	42	33.6	105	90	51	0	4	1	0
WICHITA	55	32	74	15	43	-1	T	- .3	T	2.4	27	24.8	88	83	42	0	4	0	0
KY BOWLING GREEN	53	38	66	20	46	-1	.6	- .3	.3	10.5	115	41.7	101	96	61	0	3	4	0
LEXINGTON	53	39	64	23	46	2	.7	- .1	.6	7.2	92	32.5	85	87	59	0	3	3	1
LOUISVILLE	54	39	65	24	47	2	2.5	1.7	2.3	8.6	100	38.0	101	83	59	0	3	4	1
LA ALEXANDRIA	67	50	81	33	59	2	4.9	3.7	2.5	15.1	124	47.4	--	75	55	0	0	4	3
BATON ROUGE	70	51	78	34	60	2	1.4	.4	.6	6.1	58	39.7	85	95	59	0	0	5	2
LAKE CHARLES	72	52	82	38	62	3	1.1	.2	.4	16.1	134	44.9	95	88	61	0	0	4	0
NEW ORLEANS	70	53	82	37	62	2	1.3	.4	1.1	13.0	105	53.3	108	94	63	0	0	4	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

+100 = NORMAL & ACTUAL NEAR THE SAME

Weather Data for the Week Ending Nov. 20, 1982

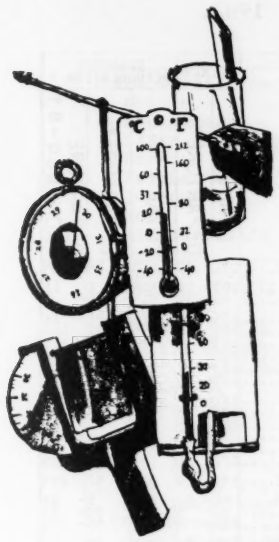
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Aug. 29	PCT. NORMAL SINCE Aug. 29	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	SHREVEPORT	58	45	72	33	52	-4	1.5	.7	1.0	10.1	103	32.4	85	95	74	0	0	4	1
ME	CARIBOU	35	16	50	8	25	-5	.8	- .1	.8	9.1	80	33.0	103	93	71	0	7	1	1
	PORTLAND	44	28	47	25	36	-2	.7	- .5	.7	7.0	64	37.9	111	83	51	0	6	2	1
MD	BALTIMORE	50	33	56	22	42	-4	T	- .7	T	7.9	83	32.6	93	85	54	0	4	1	0
	SALISBURY	55	36	62	25	45	-3	1.0	.3	.9	8.2	71	36.4	92	98	62	0	4	2	1
MA	BOSTON	46	34	50	28	40	-5	.4	- .7	.4	7.8	69	42.8	117	84	49	0	3	2	0
	CHATHAM	50	39	53	33	45	--	1.0	--	1.0	16.6	--	45.0	--	83	63	0	0	1	1
MI	ALPENA	45	28	59	19	37	2	.3	- .3	.2	6.9	83	23.0	95	92	60	0	5	2	0
	DETROIT	47	31	60	22	39	0	.9	.4	.9	7.6	101	29.2	104	88	57	0	5	2	1
	FLINT	48	32	62	23	40	2	.8	.2	.7	7.5	96	24.8	93	89	56	0	5	3	1
	GRAND RAPIDS	48	31	62	18	40	2	1.1	.4	.5	8.2	89	29.6	105	83	57	0	5	2	2
	HOUGHTON LAKE	44	28	58	19	36	2	.4	- .2	.2	7.6	84	27.7	110	91	68	0	6	3	0
	LANSING	47	31	61	22	39	1	.7	.1	.4	7.5	96	23.8	88	93	64	0	5	4	0
	MARQUETTE	40	21	57	8	31	2	.3	- .5	.2	12.1	111	34.2	108	98	67	0	5	3	0
	MUSKEGON	47	32	61	19	40	1	.9	.1	.6	9.0	95	30.8	113	85	61	0	4	3	1
	SAULT STE. MARIE	41	25	58	10	33	1	1.0	.2	.5	12.6	118	32.4	117	95	69	0	5	4	1
MN	ALEXANDRIA	39	22	47	10	30	3	.3	.1	.3	7.3	128	26.4	114	95	71	0	6	2	0
	DULUTH	37	20	53	5	29	1	1.8	1.4	1.4	12.1	151	32.4	118	91	66	0	6	2	1
	INT'L FALLS	36	16	48	-8	26	2	.8	.5	.6	9.0	123	24.4	101	98	74	0	6	2	1
	MINNEAPOLIS	45	25	60	11	35	4	.6	.3	.3	9.8	146	23.7	99	88	62	0	5	3	0
	ROCHESTER	44	25	61	10	35	3	.1	- .1	.1	11.0	162	33.7	130	89	62	0	5	2	0
MS	GREENWOOD	62	46	74	29	54	2	.7	- .5	.6	10.6	105	45.8	--	89	58	0	3	2	1
	JACKSON	66	46	75	23	56	1	1.9	1.0	.9	10.5	117	53.2	129	96	61	0	3	4	2
	MERIDIAN	66	47	73	30	57	3	3.2	2.4	2.0	8.1	93	49.6	116	85	59	0	3	3	2
MO	CAPE GIRARDEAU	54	39	64	24	47	2	.9	0	.7	5.3	47	41.7	108	96	67	0	3	3	1
	COLUMBIA	54	34	68	19	44	1	.1	- .4	.1	8.9	77	40.1	118	92	59	0	4	1	0
	KANSAS CITY	52	33	66	16	43	1	T	- .3	T	5.8	53	42.1	123	87	52	0	4	1	0
	SAINT LOUIS	54	36	75	20	45	1	1.2	.6	1.0	9.6	110	45.1	141	95	58	0	4	3	1
	SPRINGFIELD	56	35	70	15	46	1	T	- .5	T	5.2	46	35.5	100	78	50	0	4	1	0
MT	BILLINGS	45	29	56	10	37	2	T	- .2	T	3.0	94	17.1	133	71	43	0	4	1	0
	GLASGOW	40	18	52	7	29	1	0	- .1	0	2.2	100	11.1	112	77	47	0	7	0	0
	GREAT FALLS	43	26	56	15	35	1	T	- .2	T	3.8	136	16.7	122	65	41	0	6	1	0
	HAVRE	36	17	52	8	27	-2	T	- .1	T	1.8	64	14.4	131	94	60	0	7	0	0
	HELENA	42	19	54	3	31	0	T	- .1	T	3.6	150	12.9	128	79	44	0	6	1	0
	KALISPELL	36	22	43	2	29	-1	.6	.2	.2	3.7	97	17.6	130	95	73	0	4	5	0
	MILES CITY	44	22	55	12	33	2	T	- .1	T	3.9	144	14.5	115	84	41	0	7	1	0
	MISSOULA	37	21	48	7	29	-3	.2	0	.2	3.0	97	14.2	128	98	67	0	7	3	0
NE	GRAND ISLAND	50	28	61	19	39	2	.1	0	.1	5.6	112	33.9	155	84	40	0	5	1	0
	LINCOLN	51	27	64	18	39	1	T	- .2	T	5.1	78	36.0	140	75	40	0	6	1	0
	NORFOLK	48	26	56	16	37	2	.1	0	.1	8.9	171	28.9	127	89	51	0	6	2	0
	NORTH PLATTE	49	22	61	15	35	0	T	- .1	T	4.5	107	18.8	101	87	36	0	6	1	0
	OMAHA	49	31	60	20	40	3	.2	- .1	.2	7.6	109	32.2	116	85	60	0	4	1	0
	SCOTTSBLUFF	51	22	61	11	36	1	T	- .1	T	3.4	136	21.1	157	76	29	0	7	0	0
	VALENTINE	46	22	53	8	34	0	T	- .1	T	4.5	125	22.9	136	75	45	0	6	0	0
NV	ELY	47	17	53	7	32	-1	.3	.2	.3	6.5	406	14.5	196	84	37	0	7	1	0
	LAS VEGAS	61	39	67	33	50	-3	T	- .1	T	.1	11	2.7	73	58	26	0	0	0	0
	RENO	49	26	56	18	37	-2	.5	.4	.5	4.7	392	9.0	158	94	43	0	5	2	0
	WINNEMUCCA	50	21	58	8	36	-1	.3	.1	.3	2.6	153	7.3	103	81	33	0	6	2	0
NH	CONCORD	45	26	50	19	36	-2	.3	- .7	.3	5.5	57	33.0	106	77	44	0	6	1	0
NJ	ATLANTIC CITY	51	33	57	21	42	-3	.5	- .5	.5	4.7	42	28.1	72	97	58	0	3	2	0
NM	ALBUQUERQUE	55	32	59	24	44	0	.2	.2	.1	2.0	91	6.4	88	86	39	0	4	2	0
	CLOVIS	59	35	66	23	47	1	0	- .1	0	2.1	41	14.3	--	75	31	0	2	0	0
	ROSWELL	62	37	71	27	50	4	0	- .1	0	2.1	51	6.5	56	56	27	0	1	0	0
NY	ALBANY	46	26	53	21	36	-3	0	- .7	0	5.0	55	29.4	103	88	48	0	7	0	0
	BINGHAMTON	44	29	51	21	37	-1	.3	- .5	.3	5.4	56	31.7	97	80	51	0	5	1	0
	BUFFALO	49	35	61	27	42	3	.1	- .8	.1	10.6	103	36.2	117	82	45	0	3	2	0
	NEW YORK	49	39	51	33	44	-3	.1	- .9	.1	4.4	43	31.6	89	82	52	0	0	1	0
	ROCHESTER	49	31	58	24	40	0	.1	- .6	T	8.4	100	28.6	103	86	48	0	5	2	0
	SYRACUSE	49	29	58	22	39	-2	.2	- .6	.1	7.4	76	30.5	97	85	48	0	5	2	0
NC	ASHEVILLE	50	35	53	19	42	-4	.6	- .1	.4	7.9	73	45.2	114	93	64	0	3	4	0
	CHARLOTTE	54	40	57	29	47	-3	.4	- .3	.2	7.2	74	37.0	101	83	55	0	2	3	0
	GREENSBORO	52	36	57	24	44	-4	.1	- .5	.1	7.6	78	40.9	113	91	55	0	3	5	0
	HATTERAS	64	52	68	46	58	2	.6	- .4	.6	10.7	66	52.0	107	91	65	0	0	3	1
	NEW BERN	62	45	71	32	54	0	.2	- .5	.2	10.1	75	41.0	82	95	60	0	1	2	0
	RALEIGH	57	37	66	26	47	-3	.4	- .3	.3	7.3	72	39.8	106	94	50	0	4	2	0
	WILMINGTON	65	44	73	31	54	-1	.1	- .6	.1	11.0	80	50.9	103	84	49	0	1	2	0
ND	BISMARCK	42	19	52	10	30	3	.2	0	.2	5.6	181	17.6	117	92	56	0	7	1	0
	FARGO	39	21	47	9	30	3	.5	.4	.5	9.1	212	20.0	108	94	65	0	6	1	1
	GRAND FORKS	37	21	46	12	29	4	.3	.1	.3	6.9	150	20.4	113	94	63	0	6	1	0
	WILLISTON	41	15	55	2	28	1	T	- .1	T	4.7	174	15.7	115	89	52	0	7	0	0
OH	AKRON-CANTON	51	36	67	24	44	4	.2	- .5	.1	6.2	74	28.7	91	74	47	0	3	3	0
	CINCINNATI	54	40	63	23	47	4	1.3	.5	1.2	5.1	65	38.3	111	76	49	0	3	2	1
	CLEVELAND	51	34	66	23	43	2	.3	- .4	.1	8.2	98	30.5	99	80	47	0	4	2	0
	COLUMBUS	51	36	60	21	43	2	.6	- .1	.6	7.2	97	32.2	98	85	51	0	3	1	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending Nov. 20, 1982

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Aug. 29	PCT. NORMAL SINCE Aug. 29	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	DAYTON	50	35	60	21	42	1	.6	- .1	.6	4.5	63	36.5	117	86	56	0	4	2	1
	TOLEDO	48	30	60	20	39	0	1.1	.6	1.1	8.5	115	26.5	95	92	62	0	5	2	1
	YOUNGSTOWN	50	36	63	20	43	3	.2	- .5	.2	5.3	56	28.4	85	75	50	0	3	2	0
OK	OKLAHOMA CITY	59	37	79	19	48	-1	T	- .3	T	4.3	48	31.8	110	90	45	0	2	0	0
	TULSA	59	41	75	25	50	1	T	- .4	T	5.0	47	28.1	84	81	49	0	2	0	0
OR	ASTORIA	54	41	57	36	48	1	4.0	1.7	1.5	17.9	96	59.2	117	82	58	0	0	6	2
	BURNS	43	19	52	9	31	-4	.5	.1	.2	3.2	139	9.9	106	--	--	0	4	5	0
	MEDFORD	51	32	57	20	41	-1	.9	.2	.4	3.7	71	12.7	81	96	64	0	3	5	0
	PENDLETON	49	33	63	21	41	1	.2	- .2	.1	4.0	125	10.5	104	87	54	0	3	2	0
	PORTLAND	53	42	59	37	47	3	1.5	.2	.8	10.9	111	33.6	119	85	63	0	0	5	1
	SALEM	53	39	59	23	46	1	2.4	.9	1.1	7.8	72	29.2	93	88	64	0	2	5	1
PA	ALLENTOWN	48	32	52	24	40	-2	0	- .8	0	5.4	54	40.9	111	77	48	0	5	0	0
	ERIE	50	34	63	25	42	2	.2	- .7	.1	9.5	86	36.6	111	69	45	0	5	2	0
	HARRISBURG	49	33	55	22	41	-2	.1	- .7	.1	6.9	79	37.2	105	86	54	0	4	2	0
	PHILADELPHIA	50	34	56	25	42	-3	T	- .8	T	7.1	75	37.3	109	85	51	0	3	1	0
	PITTSBURGH	51	34	61	19	42	1	.3	- .3	.3	4.8	58	27.7	87	74	41	0	3	1	0
	SCRANTON	44	30	53	21	37	-3	.1	- .6	.1	4.3	48	32.8	108	83	61	0	5	1	0
RI	PROVIDENCE	49	35	54	29	42	-1	.2	- .9	.2	10.4	93	46.6	131	80	47	0	2	1	0
SC	CHARLESTON	65	49	72	42	57	1	.4	- .1	.2	7.3	61	42.5	90	92	60	0	0	3	0
	COLUMBIA	60	40	64	24	50	-3	T	- .5	T	6.5	63	45.7	110	88	54	0	3	2	0
	FLORENCE	61	42	68	30	52	-2	T	- .5	T	5.5	57	36.1	92	96	53	0	2	2	0
	GREENVILLE	53	42	56	30	48	-3	.7	- .1	.5	6.7	60	49.0	118	83	55	0	3	4	0
SD	ABERDEEN	41	22	49	9	32	2	.1	0	.1	--	--	--	--	90	65	0	6	2	0
	HURON	45	24	50	12	35	4	T	- .1	T	8.5	177	24.6	134	94	57	0	6	1	0
	RAPID CITY	52	24	63	10	38	4	.2	.1	.2	6.7	223	25.6	157	74	32	0	5	1	0
	SIOUX FALLS	41	22	51	10	32	0	.1	- .2	.1	15.6	248	30.8	131	98	69	0	6	2	0
TN	CHATTANOOGA	55	39	63	22	47	-1	1.7	.8	1.1	7.5	69	46.5	105	91	58	0	3	3	1
	KNOXVILLE	57	39	70	23	48	-1	.4	- .5	.2	8.4	90	47.7	120	96	64	0	3	3	0
	MEMPHIS	59	45	68	27	52	1	2.0	1.1	1.6	9.7	100	51.2	122	87	63	0	2	3	1
	NASHVILLE	58	41	69	23	49	2	.7	- .2	.4	7.5	85	41.1	106	91	57	0	3	3	0
TX	ABILENE	66	43	79	24	54	1	0	- .3	0	1.9	26	18.4	83	61	25	0	1	0	0
	AMARILLO	64	31	75	17	48	2	0	- .1	0	2.2	43	17.1	92	57	21	0	4	0	0
	AUSTIN	62	50	76	36	56	-2	.1	- .3	.1	6.4	64	22.6	79	91	63	0	0	2	0
	BEAUMONT	72	53	83	39	62	3	1.2	.1	.3	8.4	58	49.7	103	91	65	0	0	4	0
	BROWNSVILLE	78	61	86	51	70	2	.4	.1	.3	6.4	55	21.9	95	93	60	0	0	2	0
	CORPUS CHRISTI	73	56	86	45	65	0	T	- .3	T	4.1	38	19.3	75	84	57	0	0	1	0
	DEL RIO	71	49	83	40	60	1	T	- .1	T	1.4	21	9.6	60	77	29	0	0	0	0
	EL PASO	66	46	71	34	56	5	T	- .1	T	5.3	212	8.2	114	64	30	0	0	1	0
	FORT WORTH	61	45	81	28	53	-2	T	- .5	T	6.1	69	35.9	125	88	54	0	1	1	0
	GALVESTON	69	56	75	44	63	0	1.7	.9	1.2	5.0	40	23.7	65	95	77	0	0	4	1
	HOUSTON	68	51	81	38	60	-1	4.2	3.3	2.3	13.0	97	34.5	83	94	64	0	0	3	3
	LUBBOCK	62	37	74	24	49	1	T	- .1	T	2.2	36	18.4	105	58	23	0	3	0	0
	MIDLAND	66	41	74	26	53	1	0	- .1	0	2.5	61	12.7	101	55	25	0	1	0	0
	SAN ANGELO	69	41	80	20	55	0	T	- .2	T	1.5	22	16.3	98	80	28	0	1	0	0
	SAN ANTONIO	67	51	79	38	59	0	.1	- .3	.1	5.5	58	17.9	72	87	53	0	0	4	0
	VICTORIA	69	54	82	43	61	-1	6.8	6.3	6.6	13.1	107	30.9	99	92	65	0	0	2	1
	WACO	64	47	83	27	56	-1	T	- .5	T	3.4	39	25.2	92	95	58	0	1	2	0
	WICHITA FALLS	64	41	83	23	52	0	T	- .3	T	4.3	52	34.7	140	87	37	0	2	0	0
UT	BLANDING	44	25	48	17	34	-3	.3	.2	.2	4.8	133	14.1	129	86	65	0	5	5	0
	CEDAR CITY	51	27	58	18	39	1	T	- .2	T	4.5	161	14.6	164	74	37	0	6	1	0
	SALT LAKE CITY	50	28	56	23	39	1	.3	.1	.3	9.5	271	20.5	159	83	36	0	6	2	0
VT	BURLINGTON	46	27	51	21	37	0	T	- .7	T	6.8	72	29.5	101	78	42	0	7	0	0
VA	NORFOLK	58	44	63	34	51	0	.7	0	.7	10.6	95	44.2	111	90	62	0	0	1	1
	RICHMOND	55	37	64	27	46	-3	.6	- .2	.3	7.5	71	42.5	111	96	60	0	4	2	0
	ROANOKE	49	33	56	20	41	-5	.4	- .2	.3	9.0	89	40.7	119	93	60	0	4	4	0
WA	COLVILLE	39	29	44	18	34	0	1.6	1.1	.6	4.2	102	15.8	116	96	88	0	5	4	2
	QUILLAYUTE	48	33	52	24	41	-3	4.0	.8	1.7	26.9	88	93.0	114	99	74	0	3	6	3
	SEATTLE-TACOMA	48	39	51	30	43	-1	2.7	1.3	1.3	9.4	85	30.9	103	95	70	0	1	6	2
	SPOKANE	41	30	51	18	35	1	.6	.1	.3	4.1	98	13.5	97	96	76	0	4	5	0
	YAKIMA	46	26	56	17	36	-2	.7	.4	.6	3.4	189	8.6	139	87	59	0	6	3	1
WV	BECKLEY	47	35	52	22	41	0	.1	- .6	.1	6.6	69	38.5	102	87	58	0	3	3	0
	CHARLESTON	54	36	63	20	45	0	.3	- .4	.3	7.0	78	38.1	105	82	46	0	3	1	0
	HUNTINGTON	54	38	64	22	46	1	.4	- .3	.4	7.0	89	38.1	110	74	45	0	3	3	0
	PARKERSBURG	54	38	64	24	46	2	.5	- .2	.5	6.3	78	32.6	88	93	53	0	3	2	0
WI	GREEN BAY	44	26	62	14	35	2	.3	- .2	.2	7.2	96	26.0	107	88	59	0	5	2	0
	LA CROSSE	46	25	63	11	36	2	T	- .3	T	8.0	99	22.3	81	86	55	0	5	1	0
	MADISON	45	24	63	12	34	0	.3	- .2	.2	7.9	92	27.6	100	94	65	0	5	3	0
	MILWAUKEE	46	28	62	15	37	1	.5	0	.3	8.4	108	32.2	122	91	60	0	5	2	0
	WAUSAU	43	24	60	10	33	3	.3	- .1	.1	12.6	134	36.8	124	93	62	0	5	4	0
WY	CASPER	44	23	53	8	34	0	T	- .1	T	5.1	196	16.8	163	74	37	0	6	1	0
	CHEYENNE	46	22	53	7	34	-1	0	- .1	0	4.1	141	18.3	136	71	29	0	7	0	0
	LANDER	39	17	52	0	28	-2	0	- .2	0	4.5	125	11.6	91	72	41	0	7	0	0
	SHERIDAN	50	20	59	2	35	2	.1	- .2	.1	3.2	82	13.3	90	80	36	0	7	1	0
PR	SAN JUAN	86	74	87	73	80	1	.6	- .7	.3	7.9	42	38.2	74	86	63	0	0	5	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS



The Amateur Weather Forecaster's Log

If you've ever said, "It looks like it's going to rain," you've practiced meteorology and, on a small scale, imitated the National Weather Service's major functions: observing, forecasting, and disseminating weather information.

A number of people, however, are more than just casual observers of the passing weather scene. Many have set up their own stations and gain a great deal of personal satisfaction from recording each day's weather and trying their hand at forecasting.

With some basic instructions and a few simple instruments, some of which can be built at home, one can begin a fascinating hobby as an amateur weather forecaster.

Observing, recording, and *forecasting* are the present, past, and future tenses of meteorology.

Observations, taken accurately and at regular intervals, are of utmost importance to the weather forecaster. Weather changes are not usually heralded definitely by local indications for periods longer than a few hours in advance; indeed many local storms give scarcely an hour's notice of their coming.

Records kept of past weather can be a valuable tool in predicting future weather. The set of rules given later for forecasting weather from local indications is as reliable as any other set of local rules but in many areas they may not apply. To form such rules for any area, the amateur meteorologist must carefully and systematically record and correlate his own observations.

Forecasting is the real challenge of meteorology. Although there has been much exaggeration of the ability of mariners to forecast weather changes from local observations, they are somewhat more adept than people in most other occupations. (Pilots and farmers also acquire some skill at weather forecasting.) This is not because the signs are so much more pronounced over the ocean than over the land, but is primarily because the mariner for many years had no other source of information and of necessity learned to interpret their significance. On land, a heavy storm is not so often a matter of life or death as on the ocean, and consequently, while most people recognize a few signs, they rarely follow them out in a systematic manner to determine their reliability.

Don't trust to memory when making a weather observation—write it down. Try to take at least two readings of sky conditions and instruments each day. Additional readings will give an even better picture of changing weather patterns. Three-hourly or six-hourly observations are suitable for most amateur records.

An observer should keep a weather log to record observations. It can be just as simple or just as complete as you want to make it, depending upon the observations to be made.

Here is a brief explanation of the entries to be made in this log. Instruments for observing the weather are discussed later.

Sky: Enter the state of the sky (cloud cover) in tenths or substitute the following symbols: ○-clear (less than 1/10); ◑-scattered (2/10 to 5/10); ◕-broken (5/10 to 9/10); ⊕-overcast (more than 9/10). If some form of precipitation is occurring substitute one of the following letters for the sky symbol: R-Rain; S-Snow, H-Hail, T-Thunderstorm; E-Sleet; F-Fog; Z-Freezing Rain; L-Drizzle.

Temperature: Read all thermometers to the nearest whole degree (C or F) and enter current reading. Read the maximum thermometer at the P.M. observation and the minimum thermometer at the A.M. observation. Remember to reset these thermometers after each reading. Figure the day's mean temperature by adding the maximum temperatures and dividing by 2.

Humidity: Read wet and dry bulb thermometers of psychrometer, consult the table, and enter as a whole percentage.

Comparison of the reading on the wet bulb thermometer with those on a dry bulb thermometer will show relative humidity by using this table. Top figures on the chart are the present dry bulb reading. By checking the left column for degree difference shown on the two thermometers and across to the dry bulb reading, the relative humidity can be found. For instance, if the difference between dry and wet bulb thermometers is 6 degrees, and the dry reads 70 degrees, the relative humidity is 72 percent.

Barometer: Read barometer to the nearest hundredth of an inch (or half a millibar*). If the barometer has been rising during the past three hours, mark a plus (+) after the reading entered; if falling, mark a minus (−) after the reading.

Wind: Observe the wind direction to eight points of the compass (N, NE, E, SE, S, SW, W, NW).

Read anemometer or estimate wind speed. Enter wind direction and speed—for example NE-5 or SW-12.

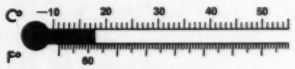
Precipitation: Read gage and enter the amount to the nearest tenth of an inch. If no precipitation has occurred leave column blank. Indicate less than a tenth of an inch by "T" for "Trace." If precipitation is snow take several readings on the ground with a yardstick. Make sure measurements are not made in drifted snow. Average the readings and enter inches followed by the symbol "•". (Generally speaking, 10 inches of snow equals one inch of water but this varies depending on the composition of the snow.)

Be sure to empty the gage after each observation.

Remarks: Enter any special phenomena such as lightning and thunder or smoke or haze and indicate times that the event was observed. Cloud entries may be made here showing type and direction of movement.

Metric Measurements

To be ready for metrication, the weather amateur should become familiar with the following conversions.



** The millibar is a unit of pressure in a universal equal to, roughly, 3 one-hundredths of an inch of mercury.*

Table of Relative Humidity
Temperature of air, dry-bulb thermometer, Fahrenheit

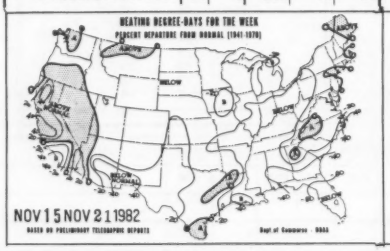
Difference between wet-bulb and dry-bulb readings	30°	40°	50°	60°	70°	80°	90°	100°
1	90	92	93	94	95	96	96	97
2	79	84	87	89	90	92	92	93
3	68	76	80	84	86	87	88	90
4	58	68	74	78	81	83	85	86
6	38	52	61	68	72	75	78	80
8	18	37	49	58	64	68	71	71
10		22	37	48	55	61	65	68
12		8	26	39	48	54	59	62
14			16	30	40	47	53	57
16			5	21	33	41	47	51
18				13	26	35	41	47
20				5	19	29	36	42
22					12	23	32	37
24					6	18	26	33

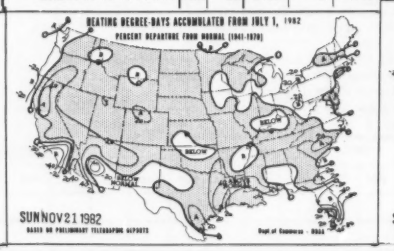
MONTH	SKY		TEMPERATURE					HUMIDITY		BAROMETER		WIND		Precipitation		Remarks
	AM	PM	AM	PM	Max.	Min.	Mean	AM	PM	AM	PM	AM	PM	AM	PM	
1																
2																
3																
4																

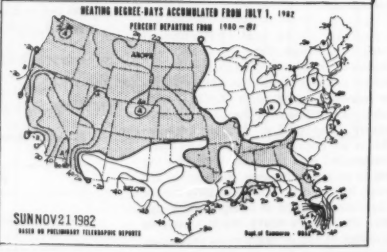
HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING NOV. 21. 1982.

BASED ON 1941-70 NORMALS. +ACCUMULATION FROM JULY 1, 1982

STATES AND STATIONS	WEEKLY TOTAL	WEEKLY DEPARTURE*	SEASONAL ACCUMULATION + TOTAL	SEASONAL ACCUMULATION + DEPARTURE*	SEASONAL ACCUMULATION + DEPARTURE FROM 1980-81
ALA.					
BIRMINGHAM	77	20	398	8	13
MOBILE	36	17	216	49	47
MONTGOMERY	41	36	236	45	86
ARIZ.					
FLAGSTAFF	195	12	1635	128	464
PHOENIX	16	30	49	72	15
TUCSON	45	11	157	5	8
WINSLOW	141	21	841	150	52
YUMA	35	8	85	27	44
ARK.					
FORT SMITH	93	16	489	81	36
LITTLE ROCK	86	24	395	29	47
CALIF.					
BAKERSFIELD	106	36	287	67	117
EUREKA	85	10	1045	324	330
FRESNO	112	26	355	54	98
LOS ANGELES	26	12	82	149	3
RED BLUFF	132	46	410	119	148
SAN DIEGO	17	18	60	90	10
SAN FRANCISCO	97	25	588	39	97
STOCKTON	116	25	449	136	154
COLO.					
DENVER	170	18	1242	206	371
GRAND JUNCTION	173	14	921	49	121
PUEBLO	163	14	951	86	97
CONN.					
BRIDGEPORT	144	5	785	124	29
HARTFORD	166	7	914	43	193
DEL.					
WILMINGTON	137	4	650	2	125
D.C.					
WASHINGTON	118	8	478	44	25
FLA.					
APALACHICOLA	15	25	106	9	32
DAYTONA BEACH	0	25	43	12	10
FORT MYERS	0	0	0	7	5
JACKSONVILLE	17	23	145	32	36
KEY WEST	0	0	0	0	0
LAKELAND	1	18	32	9	1
MIAMI	0	4	0	4	0
ORLANDO	2	18	31	11	4
TALLAHASSEE	15	37	161	7	9
TAMPA	1	17	31	8	0
WEST PALM BEACH	0	7	0	10	10
GA.					
ATLANTA	104	1	434	34	55
AUGUSTA	64	22	340	23	46
MACON	53	23	274	4	30
SAVANNAH	32	32	206	7	18
IDAHO.					
BOISE	183	1	1195	152	175
LEWISTON	173	6	1044	3	80
POCATELLO	205	8	1463	154	73
ILL.					
CAIRO	97	29	527	45	12
CHICAGO	163	27	1018	41	47
MOLINE	163	28	935	4	132
PEORIA	143	41	861	26	130
ROCKFORD	171	26	1028	38	140
SPRINGFIELD	138	32	828	47	24
IND.					
EVANSVILLE	99	46	595	59	121
FORT WAYNE	137	44	893	50	125
INDIANAPOLIS	133	37	843	50	128
SOUTH BEND	152	34	934	55	28
IOWA.					
BURLINGTON	159	28	882	1	142
DES MOINES	154	47	930	46	48
DUBUQUE	179	36	1101	56	58
SIOUX CITY	185	27	1106	51	3
KANS.					
CONCORDIA	148	28	887	87	185
DODGE CITY	131	34	672	42	90
GOODLAND	154	41	1025	10	125
TOPEKA	140	24	794	58	42
WICHITA	130	21	663	37	99
KY.					
LEXINGTON	104	47	674	5	100
LOUISVILLE	104	44	633	26	26
LA.					
BATON ROUGE	32	20	191	10	45
LAKE CHARLES	25	20	161	18	70
NEW ORLEANS	26	17	139	3	30
SHREVEPORT	75	6	332	92	19
MAINE.					
CARIBOU	273	31	1804	43	197
PORTLAND	187	4	1264	25	117
MD.					
BALTIMORE	145	6	668	33	66
MASS.					
BOSTON	158	14	777	16	189
MICH.					
ALPENA	174	44	1400	191	184
DETROIT	161	21	1029	48	206
FLINT	158	36	1065	84	312
GRAND RAPIDS	161	31	1007	62	254
HOUGHTON LAKE	186	36	1412	128	295
LANSING	157	37	1075	35	243
MARQUETTE	226	33	1907	25	112
MUSKEGON	164	24	1139	25	166
S. STE. MARIE	206	27	1889	163	202
MINN.					
DULUTH	242	26	1938	121	36
INTERNATL FALLS	264	30	1949	43	75
MINNEAPOLIS	196	44	1274	36	100
ROCHESTER	193	45	1327	28	97
ST. CLOUD	241	16	1571	66	2
MISS.					
JACKSON	51	23	351	73	9
MERIDIAN	45	37	271	48	41
MO.					
COLUMBIA	127	29	766	76	30
KANSAS CITY	137	32	804	61	36
ST. LOUIS	117	32	658	19	4
SPRINGFIELD	113	32	674	31	25
MONT.					
BILLINGS	197	18	1307	6	237
GLASGOW	267	3	1715	120	348
GREAT FALLS	223	1	1676	226	342
HAVRE	284	27	1718	135	244
HELENA	238	5	1711	39	162
KALISPELL	242	6	2001	52	207
MILES CITY	229	11	1488	92	292
MISSOULA	239	3	1691	26	62
NEBR.					
GRAND ISLAND	164	34	1109	120	187
LINCOLN	159	33	943	30	45
NORFOLK	189	32	1143	55	102
NORTH PLATTE	195	36	1304	143	203
OMAHA	154	32	911	54	153
VALENTINE	206	17	1403	164	229
NEV.					
ELY	227	3	1724	166	224
LAS VEGAS	104	13	358	98	148
RENO	195	15	1423	237	414
WINNEMUCCA	205	4	1536	217	382
N.H.					
CONCORD	194	1	1256	2	285
N.J.					
ATLANTIC CITY	139	0	718	60	197
TRENTON	135	2	652	7	136
N. MEX.					
ALBUQUERQUE	146	6	759	140	40
ROSWELL	97	38	483	76	110
N.Y.					
ALBANY	183	1	1103	20	206
BINGHAMTON	180	14	1130	77	292
BUFFALO	145	38	1011	76	133
NEW YORK	137	7	607	20	155
ROCHESTER	155	23	964	68	181
SYRACUSE	167	7	1087	89	86
N.C.					
ASHEVILLE	139	2	740	58	77
CHARLOTTE	104	0	473	50	65
GREENSBORO	125	1	619	68	25
HATTERAS	138	30	203	36	178
RALEIGH	102	8	464	16	60
WILMINGTON	50	22	301	47	69
N. DAK.					
BISMARCK	255	9	1763	187	340
FARGO	249	18	1695	150	73
WILLISTON	268	3	1767	112	301
OHIO.					
AKRON-CANTON	127	51	870	91	212
CINCINNATI	102	55	628	94	320
CLEVELAND	128	43	843	89	276
COLUMBUS	126	44	813	62	133
DAYTON	134	37	830	47	206
TOLEDO	161	25	1034	47	188
YOUNGSTOWN	131	49	930	84	334
OKLA.					
OKLAHOMA CITY	103	16	455	24	11
TULSA	85	32	414	30	5
OREG.					
ASTORIA	124	10	1076	191	16
BURNS	232	20	1859	403	188
MEDFORD	163	6	911	3	110
PENDLETON	161	11	1101	130	96
PORTLAND	128	16	812	153	113
SALEM	132	11	976	5	57
PA.					
ALLENTOWN	161	5	822	46	12
ERIE	138	43	853	254	311
HARRISBURG	146	2	710	39	268
PHILADELPHIA	136	2	638	6	142
PITTSBURGH	136	37	881	78	168
SCRANTON	177	1	982	23	128
R.I.					
PROVIDENCE	148	9	812	57	284
S.C.					
CHARLESTON	41	26	234	5	28
COLUMBIA	81	3	416	94	26
GREENVILLE	101	4	472	55	68
S. DAK.					
ABERDEEN	230	24	1480	39	95
HURON	208	32	1336	28	22
RAPID CITY	182	35	1450	170	284
SIOUX FALLS	221	14	1405	127	78
TENN.					
CHATTANOOGA	102	17	553	55	32
KNOXVILLE	94	23	565	80	53
MEMPHIS	70	35	386	27	47
NASHVILLE	83	41	519	13	39
TEXAS.					
ABILENE	59	25	265	31	82
AMARILLO	101	39	608	22	74
AUSTIN	32	0	166	4	27
BEAUMONT	29	17	157	10	30
BROWNSVILLE	0	0	19	4	7
CORPUS CHRISTI	23	2	68	17	63
DEL RIO	33	12	122	16	56
EL PASO	60	41	283	59	200
FORT WORTH	71	1	275	42	6
GALVESTON	19	7	89	18	59
HOUSTON	31	8	163	48	20
LUBBOCK	91	30	460	19	67
MIDLAND	66	24	326	25	185
SAN ANGELO	55	15	278	35	31
SAN ANTONIO	41	4	170	34	5
VICTORIA	27	4	94	8	6
WACO	56	4	221	27	33
WICHITA FALLS	78	15	321	3	75
UTAH					
SALT LAKE CITY	176	13	1154	133	281
VT.					
BURLINGTON	179	22	1091	213	451
VA.					
LYNCHBURG	121	12	553	58	163
NORFOLK	91	8	418	20	56
RICHMOND	112	5	499	26	142
ROANOKE	142	8	697	82	4
WASH.					
QUILLAYUTE	170	20	1534	32	139
SEATTLE-TACOMA	148	0	1069	71	55
SPOKANE	210	4	1466	77	77
WALLA WALLA	154	10	950	87	115
YAKIMA	196	2	1266	69	214
W. VA.					
BECKLEY	142	26	950	28	61
CHARLESTON	111	33	672	18	149
HUNTINGTON	107	36	693	8	83
PARKERSBURG	108	39	546	150	332
WIS.					
GREEN BAY	197	29	1421	63	52
LACROSSE	179	39	1191	48	84
MADISON	198	44	1333	43	106
MILWAUKEE	179	29	1102	81	188
WYO.					
CASPER	207	20	1533	119	143
CHEYENNE	200	15	1571	173	290
LANDER	240	5	1661	182	215
SHERIDAN	209	22	1451	16	108


HEATING DEGREE-DAYS FOR THE WEEK
PERCENT DEPARTURE FROM NORMAL (1941-1970)
NOV 15 NOV 21 1982
BASED ON PRELIMINARY TELEGRAPHIC REPORTS


HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1982
PERCENT DEPARTURE FROM NORMAL (1941-1970)
SUN NOV 21 1982
BASED ON PRELIMINARY TELEGRAPHIC REPORTS



Heating Degree Days (Base 65° F.)

October 1982

ALA.Birmingham	134	MAINE,Caribou	632	OKLA.Okla. City	156
Mobile	63	Portland	519	Tulsa	146
Montgomery	62	MD.Baltimore	289	OREG.Astoria	288
ALASKA,Anchorage	1184	MASS.Boston	338	Burns	659
Barrow	1796	Chatham	-	Medford	310
Fairbanks	1434	MICH.Alpena	501	Pendleton	435
Juneau	-	Detroit	383	Portland	307
Nome	1233	Flint	385	Salem	356
ARIZ.Flagstaff	640	Grand Rapids	361	PA.Allentown	347
Phoenix	1	Houghton Lake	494	Erie	336
Tucson	41	Lansing	406	Harrisburg	318
Winslow	390	Marquette	598	Philadelphia	277
Yuma	0	S. Ste. Marie	556	Pittsburgh	336
ARK.Fort Smith	186	MINN.Duluth	609	Scranton	390
Little Rock	144	Internatl Falls	612	R.I.Providence	363
CALIF.Bakersfield	29	Minneapolis	448	S.C.Charleston	102
Eureka	232	Rochester	464	Columbia	162
Fresno	62	St. Cloud	534	Greenville	177
Los Angeles	3	MISS.Jackson	120	S.DAK.Aberdeen	566
Red Bluff	93	Meridian	79	Huron	489
Stockton	72	Vicksburg	M	Rapid City	545
San Diego	1	MO.Columbia	297	Sioux Falls	494
San Francisco	130	Kansas City	307	TENN.Chattanooga	202
COLO.Denver	487	St. Louis	261	Knoxville	228
Grand Junction	397	Springfield	265	Memphis	134
Pueblo	427	MONT.Billings	453	Nashville	194
CONN.Bridgeport	371	Glasgow	607	TEX.Abilene	106
Hartford	416	Great Falls	565	Amarillo	252
D.C.Washington	193	Havre	588	Austin	37
FLA.Apalachicola	34	Helena	618	Beaumont	43
Ft. Myers	2	Kalispell	741	Brownsville	0
Jacksonville	49	Miles City	-	Corpus Christi	10
Key West	0	Missoula	611	Dallas	-
Lakeland	-	NEBR.Grand Island	385	Del Rio	20
Miami	0	Lincoln	324	El Paso	88
Orlando	14	Norfolk	389	Fort Worth	94
W. Palm Beach	0	North Platte	484	Galveston	23
Tallahassee	53	Omaha	333	Houston	53
Tampa	12	Valentine	536	Lubbock	189
GA.Atlanta	139	NEV.Ely	715	Midland	125
Augusta	125	Las Vegas	84	San Angelo	105
Macon	85	Reno	556	San Antonio	50
Savannah	73	Winnemucca	618	Victoria	21
IDAHO,Boise	432	N.H.Concord	535	Waco	73
Lewiston	415	N.J.Atlantic City	318	Wichita Falls	116
Pocatello	607	Trenton	-	UTAH,Milford	612
ILL.Cairo	201	N.MEX.Albuquerque	314	Salt Lake City	495
Chicago	372	Roswell	-	VT.Burlington	455
Moline	333	N.Y.Albany	436	VA.Lynchburg	229
Peoria	325	Binghamton	439	Norfolk	117
Rockford	362	Buffalo	382	Richmond	213
Springfield	325	New York	253	Roanoke	263
IND.Evansville	233	Rochester	377	WASH.Colville	476
Fort Wayne	345	Syracuse	449	Omak	-
Indianapolis	325	N.C.Asheville	274	Quillayute	450
South Bend	353	Charlotte	191	Seattle-Tacoma	373
IOWA,Burlington	-	Greensboro	253	Spokane	582
Des Moines	326	Hatteras	87	Walla Walla	367
Dubuque	-	Raleigh	182	Yakima	486
Sioux City	366	Wilmington	145	W.VA.Beckley	363
KANS.Concordia	313	N.DAK.Bismarck	626	Charleston	268
Dodge City	221	Fargo	589	Huntington	263
Goodland	383	Williston	633	Parkersburg	-
Topeka	303	OHIO.Akron-Canton	318	WIS.Green Bay	483
Wichita	239	Cincinnati	244	Madison	444
KY.Lexington	254	Cleveland	310	Milwaukee	381
Louisville	246	Columbus	304	WYO.Casper	604
LA.Baton Rouge	51	Dayton	320	Cheyenne	608
Lake Charles	41	Toledo	386	Lander	633
New Orleans	31	Youngstown	302	Sheridan	555
Shreveport	120				

National Agricultural Summary

November 15-21

HIGHLIGHTS...Wetness in northern areas again delayed field activities, while dry weather further stressed winter grains in the southern Plains. Rain also slowed fieldwork in California. Soil moisture supplies were adequate to surplus in most of the West North Central region, Wisconsin, North Carolina, and in the Delta area. Short to adequate supplies were reported elsewhere. Farmers had less than 4 days suitable for fieldwork in Minnesota, South Dakota, North Carolina, Alabama, Louisiana, Mississippi, and Tennessee. In other areas, 4 to 7 days were available. Winter wheat was 96% seeded, and plants had emerged on 87% of the acreage. Progress remained on schedule. Corn harvest advanced to 87%, 5 points behind average. Sorghum was 94% harvested, only 1 point behind average. Soybeans were 92% combined, ahead of the average of 91%. Cotton harvest moved to 66%, trailing the average progress of 69%. Fruit and vegetable harvests centered in Florida, California, Texas, and Arizona. Pastures were in fair to good condition, although rain was needed in the southern Plains. Livestock were in fair to good condition. Supplemental feeding increased.

SMALL GRAINS...Winter wheat seeding in the 15 major producing States was 96% complete, only 1 point behind a year ago and equal to the average progress. Seeding neared completion in all areas except California, where the crop is normally planted later. Wheat had emerged on 87% of the acreage, only slightly behind usual. The Kansas crop was in good to excellent condition except in south-central and southwestern areas where dry weather resulted in poor to fair conditions. Dryness continued to stress the Oklahoma crop. Winds sapped soil moisture and added to the problem. Texas small grains were also showing signs of moisture stress. In the Plains and north Texas, producers were waiting for an improvement in moisture conditions before completing planting. Fields already planted were slow to emerge and showed little growth. Stands were in fair condition in central and southern areas. Light showers in these areas benefited the crop. Warmer weather and rain in the eastern Corn Belt encouraged winter wheat growth. Montana's crop rated in good condition.

CORN...Harvest in the 17 major producing States was 87% completed, behind last year's 91% and the average of 92%. Combining was lagging in 7 of the 17 States. Wet conditions continued to hinder fieldwork in western and northern areas. Harvest was 33 points behind average in South Dakota, 20 points in Nebraska, 19 points in Minnesota, and 18 points behind in Wisconsin. Harvest in the eastern Corn Belt and the Southeast was virtually finished.

SOYBEANS...Harvest reached 92% completion in the 18 major producing States, compared to 93% in 1981 and the average of 91%. Progress was behind average in only 6 States. Harvest was virtually finished except in the South where combining of double-cropped soybeans picked up momentum. During the week, growers in South Carolina harvested 18% of their acreage, and those in North Carolina harvested 16%.

COTTON...In the 14 major producing States, 66% of the acreage had been harvested, compared with 62% in 1981 and the average of 69%. Progress was behind normal in 8 of the 14 States. Picking was finished in Missouri and virtually completed in Tennessee, but was only 15% finished in Oklahoma. Wetness delayed the Arizona harvest. Progress fell 17 points behind average. Rains increased boll rot in many areas of the State and caused cotton to be stringy. Harvest in Texas picked up momentum. Defoliation continued, although green bolls caused some problems on the Low Plains.

OTHER CROPS...Sorghum harvest advanced to the 94% mark, ahead of last year's slow rate of 87% and only 1 point behind average. Growers in Oklahoma harvested 20% of their acreage during the week. Harvest was about on schedule in all States except South Dakota where progress was 17 points slower than usual. Harvest in Texas neared completion. Only a few fields in low lying areas remain for harvest.

California's rice harvest neared completion. Rain slowed field operations.

Tobacco growers continued stripping and marketing crops. The Tennessee burley crop was 75% stripped. Virginia growers were marketing the burley crop and stripping the fire-cured and sun-cured crops.

Pecan harvesting was in full swing in the South, and increasing in the Southwest.

FRUITS AND NUTS...Florida's citrus groves were in good to excellent condition. Surface soils were dry in some areas, and growers were starting to irrigate. Fruit color was excellent on early maturing varieties. Cool night temperatures have benefited both fruit and trees as the winter season approaches. Arizona's citrus groves were in good condition. Citrus picking was slow due to wet conditions. Early harvest of tangerines, tangelos, and grapefruit was underway. The Navel orange harvest continued active. California's Navel orange harvest was well underway in the San Joaquin Valley, although rain has slowed maturity in some groves. The desert grapefruit harvest continued at a slow pace, but lemon picking moved along at a good pace. Pruning, fertilizing and discing of stone fruit orchards was underway. Harvest of citrus was active in Texas.

VEGETABLES...Supplies of hardy crops from northern areas were very light. Locally heavy rains in Florida caused some flooding and crop damage in Palm Beach and Dade Counties. Other areas were mostly dry with irrigation active in some fields. Shipments increased 43% from the previous week. Only sweet corn registered a decline. Rain hampered field operations throughout California. Moderate supplies of broccoli and cauliflower were available from the Salinas Valley. In the San Joaquin Valley, harvesting of cauliflower was underway. Carrot harvest progressed well in desert areas, but rain curtailed harvests in the Salinas Valley. Celery harvest was at peak in the Salinas Valley. Lettuce harvest neared completion in the San Joaquin Valley, and spring planting was underway. The market tomato harvest continued in the San Joaquin Valley and on the south coast. In the lower Rio Grande Valley of Texas, vegetables progressed well with light volumes moving to market. Harvest and planting were active in the San Antonio-Winter Garden area. Frost and cool weather slowed activities in the Trans-Pecos area.

PASTURES AND LIVESTOCK...Pastures were in fair to good condition across the South. Supplemental feeding of livestock increased, especially in northern areas to help combat cold weather and snow. In Kansas, 10% of the winter wheat was being pastured. Oklahoma winter wheat pastures desperately need rain to improve conditions.

CROP PROGRESS

FOR WEEK ENDING NOV 21

SOYBEANS
% HARVESTED

	1982	1981	AVG.
ALA	88	92	83
ARK	92	88	85
GA	74	76	69
ILL	100	100	99
IND	100	97	97
IOWA	98	100	98
KANS	98	80	95
KY	93	92	94
LA	92	87	94
MICH	100	95	94
MINN	96	99	99
MISS	84	89	88
MO	92	90	86
NEBR	100	100	100
N C	51	79	56
OHIO	100	95	100
S C	45	71	66
TENN	95	88	78
18 STATES	92	93	91

THESE 18 STATES PRODUCED 95% OF THE 1981 SOYBEAN CROP.

SORGHUM
% HARVESTED

	1982	1981	AVG.
COLO	93	60	88
KANS	95	75	95
MO	89	85	91
NEBR	90	90	95
OKLA	85	70	85
S DAK	79	100	96
TEX	100	99	98
7 STATES	94	87	95

THESE 7 STATES PRODUCED 92% OF THE 1981 SORGHUM CROP.

CORN
% HARVESTED

	1982	1981	AVG.
COLO	85	70	90
GA	99	99	97
ILL	97	94	95
IND	97	85	91
IOWA	88	96	93
KANS	98	90	96
KY	96	96	96
MICH	95	90	85
MINN	73	95	92
MO	89	89	86
NEBR	70	85	90
N C	99	100	98
OHIO	99	85	95
PA	85	87	87
S DAK	63	98	96
VA	92	92	91
WIS	69	79	87
17 STATES	87	91	92

THESE 17 STATES PRODUCED 93% OF THE 1981 CORN CROP.

COTTON
% HARVESTED

	1982	1981	AVG.
ALA	94	95	83
ARIZ	55	75	72
ARK	94	91	91
CALIF	85	90	87
GA	82	89	86
LA	94	94	95
MISS	93	98	94
MO	100	86	91
N MEX	65	66	53
N C	80	86	83
OKLA	15	15	45
S C	95	95	93
TENN	99	86	77
TEX	52	42	55
14 STATES	66	62	69

THESE 14 STATES PRODUCED 99% OF THE 1981 COTTON CROP.

WINTER WHEAT
% PLANTED

	1982	1981	AVG.
CALIF	45	43	38
COLO	100	100	100
IDAHO	100	100	100
ILL	100	96	99
IND	100	100	100
KANS	100	97	98
MO	92	89	85
MONT	100	100	100
NEBR	100	100	100
OHIO	100	100	100
OKLA	95	95	100
OREG	98	99	99
S DAK	100	100	100
TEX	93	92	94
WASH	100	98	99
15 STATES	96	95	96

THESE 15 STATES PRODUCED 88% OF THE 1981 WINTER WHEAT CROP.

WINTER WHEAT
% EMERGED

	1982	1981	AVG.
CALIF	35	30	NA
COLO	98	95	97
IDAHO	100	100	100
ILL	95	89	96
IND	97	91	91
KANS	97	98	NA
MO	86	84	79
MONT	100	100	100
NEBR	100	100	100
OHIO	99	90	90
OKLA	65	85	85
OREG	88	94	90
S DAK	100	100	100
TEX	74	86	83
WASH	98	93	95
15 STATES	87	91	NA
EXCL. STATES WITH NA	85	91	90

THESE 15 STATES PRODUCED 88% OF THE 1981 WINTER WHEAT CROP.

NA - NOT AVAILABLE

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by SRS State Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures averaged normal. Rainfall ranged from less than 1.00 in. to 4.00 in. Heaviest Montgomery.

Fieldwork: 3.0 days. Soil moisture adequate to surplus. Soybeans harvested 88%, 92% 1981, 83% average. Cotton harvested 94%, 95% 1981, 83% average. Sorghum harvested 96%. Wheat seeded 71%, 80% 1981, 85% average. Conditions: Pastures, livestock and wheat fair to good.

ARIZONA: Second consecutive week major storm system with considerable precipitation moved across State. Snowfall limited to higher elevations, White Mountains where 1 to 4 in. fell. Moisture amounts mostly between 0.50, 1.00 in. over Salt River Valley, central basins, Mogollon Rim, White Mountains except locally over 2.00 in. White Mountains. Elsewhere amounts generally between 0.10 and 0.50 in. Average temperatures varied 4° below normal northwest to 5° above southeast.

Cotton growers' resumed harvest early week, halted by midweek rains. At normal peak harvest activities, rains left harvest at standstill; 55% cotton harvested once, behind last year's 75%, average 72%. Grower's not expected to resume picking until early this week. Rains increased boll rot many areas, caused cotton to be stringy from moisture weight. Extent rain damage not known. Grade reductions expected. Harvest sorghum, corn for grain slowed due to rains. Sorghum completed Pima County. Mostly winding down remainder State. Harvest corn for grain virtually complete. Rains interrupted planting, land preparations wheat, barley. Good stands established for early plantings of these small grains Yuma County. Moderate rain damage to alfalfa already cut. Rains caused rapid slowdown vegetable harvesting activities. No apparent crop damage. Lettuce picking increased, should continue full swing central Arizona, Parker area this week. Yuma lettuce picking begun limited scale. Should be full swing shortly after Thanksgiving. Mixed vegetable harvest, including greens, cauliflower, broccoli, green onions, cabbage active central valley areas as fields permitted. Broccoli, cauliflower Yuma County made seasonal progress. Some virus disease symptoms reported Yuma fall cantaloup plantings. Citrus picking limited scale as groves dried from recent rains. Market for Navel oranges down. Harvest continued strong Maricopa County. Growers'

prorate established. Market slow for lemons, growers' volumes limited by prorate. Early harvest tangerines, tangelos, grapefruit underway. Market conditions strong these citrus products. Citrus groves good condition.

ARKANSAS: Mild, wet week. Temperatures and rainfall above normal. Highest temperature 86°, lowest 13°. All departures ranged from 0 to +5°. Most rainfall 4.83 in., least trace.

Four days suitable for fieldwork. Soil moisture adequate. Soybeans fair condition, harvested 92%, 88% 1981, 85% average. Cotton good condition, harvested 94%, 91% 1981, 91% average. Wheat good condition, planted 88%, 85% 1981, 87% average. Oats good condition. Pastures imporved, average. Cattle good condition.

CALIFORNIA: Early in the week dense fog domination the San Joaquin and the Sacramento Valleys. By midweek, cold Alaskan air had moved southward into northern California forming an intense storm system that brought very cold temperatures and copious amounts of rain and snow. The storm dominated the States weather for the remainder of the week with moderate to heavy amounts of rain in central and southern California and below normal temperatures.

Field activities slowed due to wet weather. Cotton harvest - 85%, compared to 90% a year ago. Quality down due to staining. Rice harvest slowed but nearly complete. Rains beneficial to small grain seedlings. Winter wheat planted - 45%, compared to 43% a year ago. Winter wheat emerged - 30%, same as last year. Large percent of sugarbeets expected to be overwintered. More losses expected in unharvested dry bean fields. Stone fruit orchards were being pruned, fertilized and disced in the San Joaquin Valley. Kiwi picking in Sacramento Valley nearing completion. Packing will continue for several weeks. Desert date harvest continued with fair quality reported. Navel orange harvest well underway San Joaquin Valley. Rain has slowed maturity in some groves. Desert grapefruit harvest continued at slow pace. Desert lemon picking continued at a good pace. Quality reported better than last year. Harvest of Desert tangerines continued. Rain hampering field operations. Crop progress not affected. Artichoke supplies light, variable quality, Salinas Valley. Broccoli supply moderate, quality good, Salinas Valley. San Joaquin Valley plantings being sprayed - worms, aphids. Cantaloup harvest continuing, Desert. Cauliflower supply moderate, quality variable, Salinas Valley. San Joaquin Valley harvest underway. Santa Maria supplies light, quality good. Carrot harvest progressing well, Desert. Salinas carrot supply light. Rain curtailing harvest. Celery supplies heavy, quality good, Salinas Valley. Season at peak. Lettuce harvest almost complete, quality good, San Joaquin Valley. Spring planting underway. Palo Verde Valley progressing well. Salinas Valley supplies light, variable weight and quality. Season ending. Dehydrating onion harvest ending, Tulelake-Butte Valley. Sweetpotato harvest ending, San Joaquin Valley. Market tomato harvest continuing, San Joaquin Valley, south coast. Cool weather retarding grass growth. Soil moisture ample. Supplemental feeding tapering off as range feed grains strength. Calving, lambing active.

COLORADO: Temperatures averaged 5° above normal. Pacific cold front brought cooler temperatures and rain and snow to the western valleys late in the week.

Except for corn and sorghum grain harvest, farming activities are almost complete. Winter wheat seeding completed and the crop has emerged on 98% of the acreage. Corn grain harvest 85% complete. Last year only 60% of the acreage had been harvested at this time. Livestock in good condition.

FLORIDA: High pressure and northeast winds dominated the week, with a stationary front and showers over extreme southern portions. By the 17th, the stationary front moved north as a warm front with little or no effect. Temperatures remained above normal. Rainfall sparse except for showers along southeast coast and over Everglades.

Soil moisture mostly adequate Panhandle, upper northern Peninsula, short, lower northern Peninsula, most central areas, adequate most of south, surplus along lower East Coast. Soybean harvest nearing completion, yields variable. Cotton harvest slowing. Sugarcane harvest full swing. Hay harvest practically complete. Seeding small grains nearing completion. Winter forage good progress except dry areas. Pastures good to excellent south, most central counties and northeast; poor to fair elsewhere. Cattle mostly good condition. Most citrus groves good to excellent condition. Surface soil dry in sandy ridge areas. Growers starting to irrigate. Fruit color excellent on early maturing varieties. Cool nighttime temperatures beneficial to both fruit and trees as winter season approaches. Warm days, mild nights continued in vegetable areas. Skies sunny to partly cloudy with rainfall in early week. Rains, some locally heavy, again concentrated along southeast coast. Some flooding, crop damage occurred Palm Beach, Dade Counties. Other areas mostly dry. Irrigation active drier sections. Total vegetable shipments up 43% from previous week. Volume declined sweet corn. Supplies increased all other vegetables. Limited supply of fall watermelons available. Quality, size good.

GEORGIA: Mostly cloudy with rainfall averaging between 1.50 and 2.00 in. except less than 1.00 in. in southeast. Temperatures were 1 to 3° below normal north and 2 to 4° above normal south. Weekend of 20th and 21st cloudy skies, drizzle and light rain continued. Rainfall averaged 0.10 in.

Soil moisture: 2% very short, 17% short, 60% adequate, 21% surplus. Four days suitable for fieldwork. Major activities: Cotton, soybean and pecan harvest and planting small grains. Conditions: Cotton 4% poor, 31% fair, 57% good, 8% excellent; soybeans 5% poor, 44% fair, 48% good, 3% excellent; pecans 9% poor, 52% fair, 34% good, 4% excellent; wheat 36% fair, 62% good; rye 29% fair, 68% good; other small grains 30% fair, 70% good; cattle fair to mostly good; hogs good. Crop progress: Cotton 82% harvested, 89% last year, 86% average; soybeans 74% harvested, 76% last year, 69% average; wheat 52% planted, 59% last year, 64% average; rye 86% planted, 84% last year, 78% average; other small grains 75% planted, 81% last year, 76% average; pecans 63% harvested, 55% last year, 51% average.

HAWAII: Weather generally favorable. However, overcast skies and wet weather few sections, slowed crop progress and curtailed harvesting. Crop progress fair to good most growing areas. Spraying continues for disease and insect control. Vegetables: Supplies adequate for most crops. Bananas: Most orchards in active harvest. Papayas: Supplies moderate. Orchards major growing areas fair to good. Pineapples: Low harvest. Sugar: Gradually slacking. Pastures: Generally fair to good. Rains beneficial.

IDAHO: Fair weather generally prevailed the first of the week with a storm system moving in the last of the week. Precipitation amounts were near normal. Temperatures ranged from near normal to 3° below normal in the north. The high was 59° at

Homedale, the low was once again at Stanley with 6° below zero.

Already wet fields combined with new precipitation kept fieldwork to a minimum last week. A reported high moisture content in some corn fields causing some harvest delay. Much of the fall fieldwork completed. Very few cattle remain on the range. No calving or lambing occurring yet.

ILLINOIS: Temperatures normal to 7° above normal. Precipitation light to moderate. Most sections 0.10 to 0.50 in. in north, 1.00 to 2.00 in. in south.

Corn 97% harvested, 94% 1981, 95% average. Winter wheat crop condition 13% excellent, 81% good, and 6% fair. Sorghum 97% harvested. Intended corn and soybeans ground 57% tilled (plowed or chiseled), 54% 1981, average 64%. Pastures 3% excellent, 66% good, 26% fair, 5% poor; supplying 35% of livestock roughage, 32% average. Soil moisture 2% short, 80% adequate, 18% surplus. Days suitable fieldwork 4.5.

INDIANA: Fieldwork averaged 5 days. Topsoil and subsoil moisture adequate. Corn 97% harvested, 1981 85%, average 91%. Corn moisture content 18%. Soybeans 100% combined, 1981 97%, average 97%. Wheat 100% seeded, 1981 100%, average 100%. Wheat 97% emerged, 1981 91%, average 91%. Spring cropland 50% tilled, 1981 40%, average 50%. Tobacco 30% stripped or baled.

IOWA: A mild week with light rain or drizzle late week.

Topsoil moisture: 56%, surplus, 44% adequate. Subsoil moisture: 32% surplus, 68% adequate. Corn harvested: 88%, last year 96 %, normal 93%. Sorghum harvested: 88%, last year 93%, normal 96%. Fertilizer application complete: 26%, last year 39%. Total plowing completed: 29%, last year 42%. Fieldwork: 4.8 days suitable. Livestock in good condition. Soybeans harvested: 98%, last year 100%, normal 98%.

KANSAS: Some rain southeast, locally 0.05 to 0.20 in. Temperatures averaged 42° northwest, 46 to 48° east and south--4 to 6° above normal.

Sorghum 95% harvested, 75% last year, 95% average. Soybeans 98% harvested, 80% last year, 95% average. Corn 98% harvested, 90% last year, 96% average. Wheat 100% planted, 97% last year, 98% average; 97% emerged, 98% last year; 10% pastured, 5% last year and average. Wheat condition continues good to excellent except southwest and south central where poor to fair. Pasture and range condition same as wheat. Topsoil moisture short southwest, central, south central; short to adequate elsewhere. Subsoil moisture short southwest, south central; adequate north; short to adequate elsewhere. Feed grains, hay and forage supplies adequate to surplus. Fieldwork: 6.0 days suitable.

KENTUCKY: Past week cloudy and damp. Rainfall averaged 1.00 to 3.00 in. with heaviest amounts north central. Temperatures 5 to 10° above normal.

Corn harvest final stages, 96% complete, same as year ago and average. Soybean harvest 93% complete, 92% last year, 94% average. Rain will aid wheat growth. Burley market opened Nov. 17.

LOUISIANA: Rainfall averaged over 1.50 in. except south central and southeast. Temperatures normal to 2° below normal.

Soil moisture adequate to surplus. Days suitable: 3.8. Cotton harvested 94% 1982 and 1981, 95% average. Soybeans harvested 99% 1982 and 1981, 98% average. Sugarcane harvested 57%, 62% 1981, 58% average. Wheat seeded 67%, 63% 1981, 85% average; emerged 44%, 43% 1981; condition fair to good. Pecans harvested 58%, 40% 1981, 56% average. Vegetables rated fair to good. Pastures and livestock rated fair to good.

MARYLAND AND DELAWARE: Temperatures averaged 1 to 3° below normal. Northern and western Maryland averaged mostly 2 to 3° below normal while southern Maryland and the Eastern Shore was 1 to 2° below normal. Rainfall came as scattered showers from the east dumping 1.00 to 2.00 in. on the Shore and 0.50 in. elsewhere.

Harvest activities gradually ending. Most fall fieldwork was completed last week. Small grain seeding virtually completed while only a few corn fields remain unharvested. Soybean harvest remained the major job to finish.

Maryland: Corn harvest 95% complete, 100% last year, 90% previous week. Soybean harvest made excellent progress. By week's end 85% of bean acreage harvested; last year 80% harvested. Maryland tobacco 15% stripped this year and last. Small grain seedings 100% complete equal to last year's progress. Topsoil moisture remained adequate. Subsoil moisture short to adequate in northern and western Maryland and adequate elsewhere.

Delaware: Corn harvest completed by November 7th allowing plenty of time for farmers to combine soybeans. Soybeans combined stood at 95%, 85% last year. Small grain seedings were one week ahead of schedule for rye but equal to last year's wheat seeding progress. Topsoil and subsoil moisture adequate. Five days suitable for fieldwork.

MICHIGAN: Above normal temperatures were reported. Temperatures averaged 4 to 7° above normal. Moderate amounts of rainfall fell across the southern two thirds of the Lower Peninsula.

Corn harvest progressed to 95% complete, 90% in 1981 and 85% average. Soybean harvest complete, ahead of last year and average.

MINNESOTA: Temperatures averaged from the upper 20's in the north to the mid 30's in the south and were generally 2 to 6° above normal. The highest reported temperature was 64° at Winona and the lowest was 2° at Fosston and Pipestone. Precipitation was generally less than 0.50 in. in the west and south. Rainfall of 0.75 to 2.00 in. combined with rapid snow melt caused some flooding in the northeast. Rainfall averaged 1.60 in. for the northeast. The largest reported total was 2.17 in. at Grand Marais.

Rain and warm temperatures thinned snow cover, which should help ground freeze faster when cold weather returns. Mud making fieldwork nearly impossible most areas. Some areas, farmers can harvest at night if ground freezes enough. Moisture content of corn for grain remaining high for so late in fall. Topsoil moisture: 31% adequate, 69% surplus. Harvested: Corn 73%, 1981 95%, normal 92%; sunflowers 85%, 1981 95%, normal 94%.

MISSISSIPPI: Temperatures 2 to 5° above normal. Extremes: 18 and 80°. Slow moving cold front at midweek brought heavy rains to southern two-thirds of State. Greatest 24-hour rainfall 3.18 in. at Natchez.

Soil moisture adequate to surplus. Fieldwork: 2.8 days suitable. Cotton 93% harvested, 98% last year, 94% average. Soybeans 84% harvested, 89% last year, 88% average. Pecans 60% harvested, 59% last year, 60% average. Winter wheat seeding 70% completed, 82% last year, 86% average; condition fair to good. Pasture and livestock condition fair to good.

MISSOURI: Temperatures averaged 2 to 4° above normal. Rain over the eastern half of State aver-

aged over 1.00 in. in Bootheel but less than 0.50 in. in northeast. In western half of State rain averaged less than 0.10 in.

Fieldwork: 4 days suitable. Corn 89% harvested, last year 89%, normal 86%. Grain sorghum 89% harvested, last year 85%, normal 91%. Soybeans 92% harvested, last year 90%, normal 86%. Winter wheat seeding 92% completed, last year 89%, normal 85%. Winter wheat 1% excellent, 52% good, 43% fair, 4% poor. Fall plowing 53% completed, last year 50%, normal 51%. Pasture condition 3% excellent, 53% good, 43% fair and 1% poor. Topsoil moisture supply 21% surplus, 61% adequate and 18% short.

MONTANA: Cold temperatures first and last of week. Mild temperatures midweek. Canadian cold air over north central held temperatures 3° below normal. West and southwest temperatures averaged 2° below normal. Elsewhere windy several days and temperatures averaged 1° above normal. Highest 59° at Broadus, lowest -19° at West Yellowstone. Precipitation was confined to area west of Divide and mountains. Over these areas precipitation totals were mostly 0.50 to 1.50 in.

Cold temperatures and snow cover at times increased supplemental feeding of livestock, but most winter ranges open for grazing. Winter wheat continues in good condition and soil moisture supplies good. Farm and ranch activities mostly preparing for winter.

NEBRASKA: Precipitation: Widespread light rain at midweek. Amounts less than 0.20 in. Temperatures: 2 to 7° above normal.

Corn harvested 70%, 85% last year and 90% normal. Progress most advanced in southern third and least advanced in central and northern areas. Sorghum 90% harvested, same as last year and 95% normal. Winter wheat good. Pasture and range feed supplies adequate. Topsoil moisture mostly adequate to surplus. Subsoil supplies adequate. Days suitable for fieldwork 4.6.

NEVADA: Clear skies and light winds dominated weather pattern early part of week. Stormy weather returned midweek with heavy snows high elevations. Precipitation occurred all areas except south. Temperatures averaged below normal most areas.

Cotton harvest well along. Grading and marketing potatoes active. Livestock feeding operations hampered by inclement weather.

NEW ENGLAND: Low pressure moved across region early in the week. High pressure dominated weather the remainder of the week. Average temperatures ranged from around 30° near the Canadian Border to around 40° along the south coast. Average precipitation amounts ranged from 0.50 in. over eastern areas to 0.25 in. or less over western areas.

NEW JERSEY: Temperatures were near normal, averaging 42° north, 45° south and 47° coastal areas. Extremes: 17° at Newton and 71° at Toms River. Precipitation below normal, averaging 0.06 in. north, 0.02 in. south and 0.04 in. coastal sections. Heaviest 24 hour total reported 0.06 in. on 20th to 21st at Belvidere Bridge and Newton.

Light harvest of hardy vegetables continues. Harvest of field corn about 85% complete. Soybean combining nearly 75% complete. Potaotes, sweetpotatoes and apples available from storages. Cider making active. Fall sown grains in good condition.

NEW MEXICO: Average temperatures were between 2 and 4° above normal over the east and south and near normal in the rest of the State.

Precipitation was received in most areas about midweek. Soil moisture in adequate supply in the northern areas. The southern areas remain in a short supply. Cotton harvest remained active. Small grain fields continue to increase in activity. Grain sorghum fields in good condition with about 85% of the crop harvested. Pecans in good condition with harvest activity continuing to increase. Red chile harvest continuing. Lettuce harvest complete in the Mesilla Valley. Ranges in mostly good condition with the northern areas in excellent condition. Livestock remain in good condition. Shipping of cattle continuing. Cotton harvested 85%, 66% 1981, 53% average. Small grain fields in good condition. Grazing of small grain fields continue to increase in activity.

NEW YORK: Relatively dry, most rain fell in far north and far south early in week. Seasonally cool early in week, very mild by weekend. Many areas dry.

NORTH CAROLINA: Temperatures below normal in the west, slightly above normal in the east. Precipitation: Heavy in the mountain region.

Fieldwork: 3.9 days suitable. Soil moisture: 78% adequate and 22% surplus. Conditions: Wheat, oats, barley, and rye mostly good. Harvest: Cotton 80%, 1981 86%, average 83%; sorghum 94%, 1981 92%, average 92%; soybeans 51%, 1981 79%, average 56%; corn for grain 99%, 1981 100%, average 98%. Major farm activities: Soybean and cotton harvest, seeding of small grains, land preparation, cutting of firewood, and machine repair.

NORTH DAKOTA: Temperatures averaged slightly below normal southeast and up to 4° above normal over rest of State. Southwest and south central districts were warmest, with average temperatures of 31°. North central district was coolest with average of 26°. Extremes from 58° northwest and south central to -2° southeast. Precipitation averaged near or below normal in all but east central district where average was 0.40 in.

Favorable weather midweek allowed progress on sunflower and corn harvest. Considerable acreage still standing. Crops were still high in moisture content and required mechanical drying. Colder weather with snow in east moved in over weekend. Harvest again delayed, especially eastern regions. Supplemental livestock feeding necessary.

OHIO: Temperatures reached 60° by 19th; averaged 4 to 7° above normal. Lows exceeded normal by over 10° after starting week in 20's. Warming trend reflected in soil temperatures; averaged mid to upper 40's. Highs over 50°. Most of rain fell at end of period. Totals exceeded 2.00 in. south and over 1.00 in. other sections.

End of week rains and warming trend will make fall plowing easier and encourage winter wheat growth. Some concern of early planted winter wheat getting too tall. Weather beneficial to livestock. Main farm activities included fall plowing, spreading fertilizer, hauling manure, general farm maintenance, stripping tobacco and harvesting corn. Soybeans harvested 100%, 95% 1981, 100% average. Corn harvested 99%, 85% 1981, 95% average. Winter wheat planted 100%, 100% 1981, 100% average. Winter wheat emerged 99%, 90% 1981, 90% average. Tobacco stripped 25%.

OKLAHOMA: No significant rainfall. Temperatures varied from 2° below normal west central to 2° above normal north central.

Dry weather continued to be detrimental to wheat pasture development, especially in western areas. Dry winds sapped moisture, causing stress on wheat

that is up-to-stand. Wheat planted: 95%, 95% 1981, 100% average. Wheat emerged: 65%, 85% 1981, 85% average. Sorghum harvested: 85%, 70% 1981, 85% average. Cotton harvested: 15%, 15% 1981, 45% average. Days suitable for fieldwork: 6.4.

OREGON: Temperatures averaged slightly above normal along coast and northern half of Willamette Valley; near normal or slightly below elsewhere. Precipitation up to 3.70 in. along coast. Interior Valleys received 1.30 to 2.50 in. Less than 1.00 in. east of Cascades.

Soil moisture supply mostly adequate to surplus. Winter wheat condition good; 98% seeded, 99% last year and average. Emergence at 88%, 94% last year, 90% average. Late seeding has resulted in growth delays. Spraying in grains and legumes continuing. Some caneberry training and pruning. Fall and winter vegetable crops being harvested. Cattle condition good. Fall range and pastures good to excellent. Cattle turned on to stubble fields. Cold weather limiting pasture growth.

PENNSYLVANIA: Considerable cloudiness east and generally fair west most of week with moderating temperatures last half of period. Readings near normal east and 3 to 8° above normal west. Coolest week of season with extremes of 8 and 61°. Light sprinkles beginning and ending of week with precipitation measuring near 0.10 in. or less most eastern areas and near 0.25 in. west with up to 3 in. of snow in the Erie area.

Five days suitable. Moisture adequate to short. Activities: Spreading manure, lime and fertilizer; drying corn; chopping corn stalks; baling fodder; and harvesting soybeans, green chop and grain corn. Soybeans 89% harvested, last year 85%. Corn 85% harvested, last year 87%, average 87%. Harvest of fourth crop alfalfa virtually complete, same time as last year. Quality of hay made fair to poor. Feed from pastures below average to average.

PUERTO RICO: Island average rainfall 2.11 in. or 0.65 in. above normal. Highest weekly total 5.54 in. Temperatures averaged about 78° on Coasts and 72 to 69° Interior Divisions. Extremes: 91 and 55°.

SOUTH CAROLINA: Cool beginning warmed to above-normal temperatures at weekend. Several days of light, general rainfall.

Cotton 95% harvested this year and last, average 93. Soybeans at 45% harvested remains behind year ago 71, average 66%. Producers seeding small grains, some following soybeans. Preparing and fumigating tobacco beds. Wheat about half planted, behind year ago. Wheat emergence also below last year; condition remains good.

SOUTH DAKOTA: Temperatures averaged normal to 5° above normal. Extremes: 66 and -4°. Precipitation up to 0.20 in. Most trace to 0.10 in. Up to 3.5 in. of snow in southwest.

Topsoil moisture surplus southeast and east central and much of central and south central. Adequate elsewhere except small area in west central. Reports: 1% short, 51% adequate, 48% surplus. Three days suitable. Corn harvest 25 days late, sunflowers 15 days late, and grain sorghum 22 days late. Melting snow has kept fields wet. Corn for grain harvested 63%, 1981 98%, average 96%. Soybeans harvested 95%, 1981 100%, average 100%. Sorghum for grain harvested 79%, 1981 100%, average 96%. Sunflowers harvested 90%, 1981 100%, average 100%.

TENNESSEE: Days suitable for fieldwork: 3.6. Soil moisture 67% adequate, 19% short, 14% surplus. Corn harvested 93%, 1981 93%, average 85%. Cotton picked 99%, 1981 86%, average 77%. Soybeans harvested 95%, 1981 88%, average 78%. Burley tobacco stripped 75%, 1981 76%, average 71%. Wheat sown 89%, 1981 87 %, average 86%. Livestock good. Pastures fair.

TEXAS: Cold Canadian air plunged through Texas early week, bringing temperatures in the 40's and 50's. Low developing coastal plains resulted in widespread precipitation northward, eastern flank. Temperatures averaged 4 to 6° above normal. West, northwest sectors slightly above normal in precipitation.

Crops: Harvesting activities continues. State enjoyed warm, open weather. Plains, sorghum harvest nearing completion. Cotton harvest picking up pace. Dry weather has delayed emergence, development of small grains. Cotton harvest gained momentum. Despite dry growing season, yields better than expected. Defoliation continues, green bolls providing some problems Low Plains. Cross-Timbers, East Texas, fields remain wet. Statewide condition was 63% normal, 2% excellent; 25% good; 58% fair; 15% poor. Last year's crop was 82% of normal. Sorghum harvest virtually complete. Remaining fields harvested, only some fields in low lying areas remain. Yields good, most grain showing good quality. Small grains showing affects of moisture stress. Plains, North Central Texas, producers awaiting improvement in moisture conditions before completing planting. Fields already planted slow to emerge; shown little growth, Central, South Texas, light showers reported, small grains have established fair stands. Condition: 58% of normal compared with 88% a year ago. Currently, report 6% excellent; 22% good; 44% fair; 27% poor, 1% failure. Peanut harvest continued. Yields affected by drought conditions. Soybean harvest slow East Texas, Coast. High Plains, harvest wrapping up. Cotton open bolls 96%, 95% 1981, 97% average. Cotton harvested 52%, 42% 1981, 55% average. Sorghum harvested for grain 100%, 99% 1981, 98% average. Wheat planted all purposes 93%, 92% 1981, 94% average. Wheat emerged 74%, 86% 1981, 83% average. Peanuts harvested 79%, 78% 1981, 88% average. Soybeans harvested 82%, 72% 1981, 83% average. Sugarbeets harvested 84%, 88% 1981, 78% average. Pecans harvested 47%, 41% 1981, 39% average. Sunflowers harvested 95%, 84% 1981, 91% average. Oats planted 87%, 90% 1981, 93% average.

Commercial vegetables: Lower Rio Grande Valley, vegetables progressing well. Tomatoes, bell peppers, cucumbers, squash moving in light volumes. Onion planting complete. Citrus harvest active. Packing of gift fruit underway. San Antonio-Winter Garden, cabbage, carrot, bell pepper harvest active. Onion, carrot planting continued. Zavala County area, spinach harvest underway soon. East Texas, sweetpotato harvest virtually complete. With demand light, final harvest slow. Trans-Pecos, frost, cool temperatures slowed most activity. Pecan harvest continues. Most areas report light crop.

Range and pasture conditions continued to show moisture stress. Grazing limited, supplemental feeding active. Plains, high winds, little rainfall have depleted surface moisture. Pastures in poor condition. Light rain in Central, East, South Texas promoted some growth. Livestock in fair condition.

UTAH: Precipitation in north central part of State during latter part of week. Accumulated amounts variable but heavy at a few locations. Average temperatures ranged from 13° below normal to 1° above.

Weekend storm halted harvest of corn for grain and fall plowing. Turkey processing continues. Sorting and marketing of potatoes, apples, and onions continues. Most livestock in good condition.

VIRGINIA: Cool at beginning with minimum temperatures well below normal through early and midweek warming to above normal by end of period. Highest 73° and lowest 13°. Precipitation averaged about 1.00 in., heaviest in east and least in north. Most 2.58 in. at Mathews.

Cool, damp conditions slowed most activities: Topsoil moisture improved along the coast but remained about the same elsewhere with 10% short, 83% adequate and 7% surplus. Days suitable for fieldwork dipped to 4.6 days. The most noticeable drops were along the coast and in the southwest. Major activities were corn and bean harvest, small grain seeding and hunting. Corn harvest 92% complete, same as last year but one point ahead of the average. Soybeans 76% harvested, the same as last year but 9 points ahead of normal. Grain sorghum harvest 64% complete, 74% in 1981 and 66% average. Wheat seeding 87% finished, 84% 1981 and 79% average. Cotton harvest complete. Winter grains and grazing crops in excellent condition with pastures doing nearly as well. Other activities on farms include liming and fertilizing, fence and building repair, cutting firewood, recordkeeping, soil sampling, stripping fire and sun-cured tobacco and marketing burley, cattle marketing and calving and lambing.

WASHINGTON: A large high pressure system centered over southern British Columbia produced a dry and cool northeasterly flow over the State during the weekend. The coldest minimum temperatures were reported on 14th and 15th, but a front approached the coast as the high moved to the east and precipitation began 15th on the coast. A moderately strong and wet low pressure system developed on the front and crossed the State on 17th and 18th. Temperatures warmed and minimum temperatures were near 10° higher than those reported over the weekend and afternoon highs climbed into the 50's. There were many reports of precipitation in excess of 1.00 in. on 17th and 18th on both sides of the Cascades.

West: Christmas trees, carrots, and celery were harvested. Livestock in good condition and on winter rations. Hay supplies adequate. Pruning and tying of caneberries continued.

East: Planting of fall grains virtually complete. Winter wheat and barley in good to average condition. Field corn and potato harvests continued. Carrot harvest winding down. Livestock still grazing corn stubble and pastures. Fruit growers began pruning and fertilization. Winter wheat 100% planted, 98% 1981, 99% average. Winter wheat 98% emerged, 93% 1981, 95% average.

WEST VIRGINIA: Temperatures averaged near normal except in the northeast where the average was 4° below normal. High 64°, low 12°. Precipitation below normal except in the northwest where it was near normal.

Soil moisture adequate to short. Days worked averaged 4.8. Pasture condition poor to fair. Corn 94% harvested.

WISCONSIN: A very mild week as temperatures averaged 2° above normal. Temperatures ranged from a very pleasant 63° in Madison and Milwaukee on the 20th to a much more polar-like -1° in Grandmother Falls (Lincoln County) on the 15th. Rainfall was quite variable with most districts reporting totals in the 0.20 to 0.50 in. range.

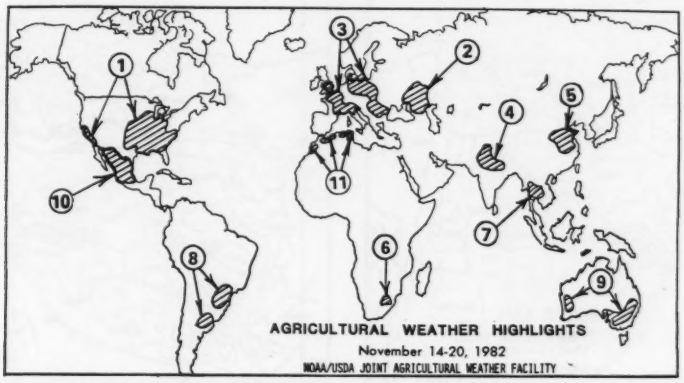
Fieldwork: 4 days suitable. Corn harvesting 69% complete, 79% 1981, 87% average. Some farmers have encountered problems with dry down. Soybeans 90% harvested, 88% 1981, 97% average. Fall plowing 37% complete, 61% 1981, 57% average. Topsoil moisture supplies 35% adequate and 65% surplus. No area of the State reported any shortage of moisture supplies. Poor field conditions continue to limit harvesting progress in northern areas.

WYOMING: Generally cool and dry except in extreme west where moisture 0.25 in. above normal. Temperatures below normal, especially in north central.

Winter wheat mostly good condition. Corn harvest continues as weather permits. Fall plowing active. Livestock mostly good condition. Little supplemental feeding thus far. Livestock producers busy with pregnancy testing, vaccinating, and insecticide applications.

International Weather and Crop Summary

November 14 to 20



1. UNITED STATES . . . Continued wetness from the Corn Belt into the South keeps harvesting slow while the southern Plains winter wheatlands remain too dry. Rains impede harvesting of California fruits and vegetables.

2. WESTERN USSR . . . Unfavorably dry weather continues over major winter grain areas of the southeast.

3. EUROPE . . . Wet weather saturates topsoils in England, France, and northern Italy. Showers improve moisture conditions in West Germany, Poland, and Romania.

4. SOUTH ASIA . . . Dry weather covers most winter grain areas. More rain is needed in unirrigated areas.

5. EASTERN ASIA . . . Dry weather returns to winter grains in the North China Plains.

6. SOUTH AMERICA . . . Showers aid planting and early growth of corn. Additional moisture needed, especially in northeastern portions of Maize Triangle.

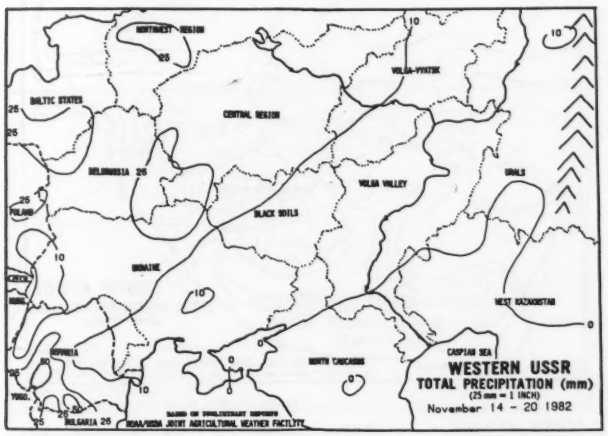
7. SOUTHEAST ASIA . . . Scattered showers benefit rice. Below-average rainfall continues in Indonesia.

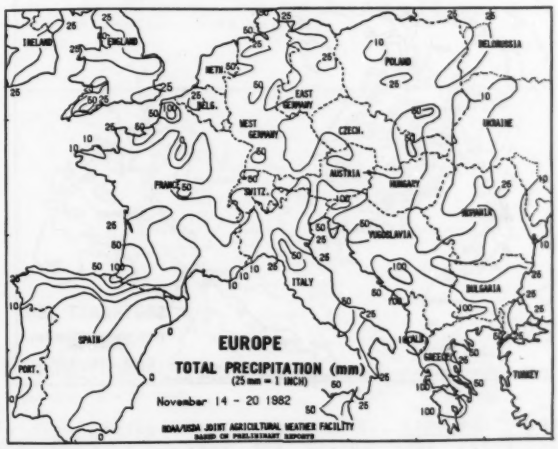
8. SOUTH AMERICA . . . Heavy rain again impedes wheat harvesting and soybean planting in southern Brazil. Generally favorable weather in Argentina benefits wheat harvest and early vegetative growth of summer crops.

9. AUSTRALIA . . . Wheat harvesting proceeds rapidly as drought continues. Tropical showers fall in north.

10. MEXICO . . . Very light rain over the northwest only slightly benefits wheat and rangeland. Dry weather elsewhere aids harvesting but further depletes soil moisture.

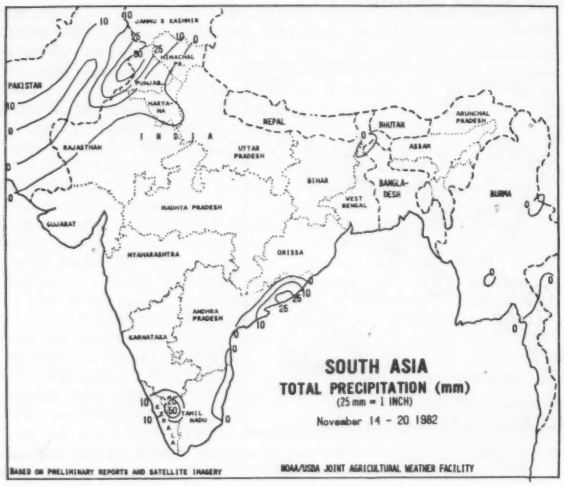
11. NORTHWEST AFRICA . . . Showers continue to benefit winter grains in Algeria and Tunisia. Morocco will need timely rains as subsoil moisture appears limited.



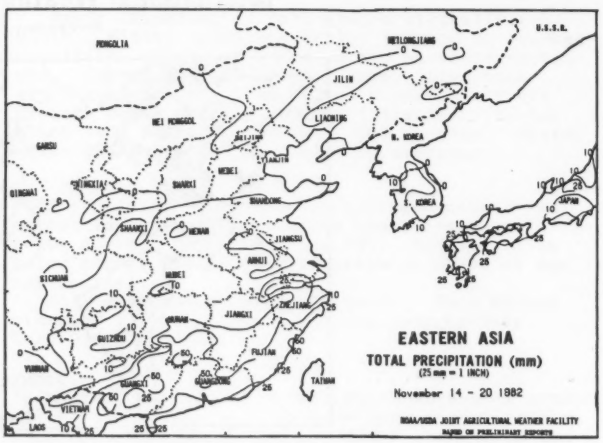


WESTERN USSR...Two fronts traversed the region, weakening as they moved eastward. Consequently, significant amounts of precipitation covered northwestern crop areas, while the southeast continued unfavorably dry. Normally, winter grains enter dormancy by late November in most areas as temperatures became too low to permit growth. Above-normal temperatures covered the major winter grain areas this past week, allowing plant growth. Continued above-normal temperatures and significant amounts of rain are required in the North Caucasus and southern Volga Valley to ensure establishment of plants before dormancy.

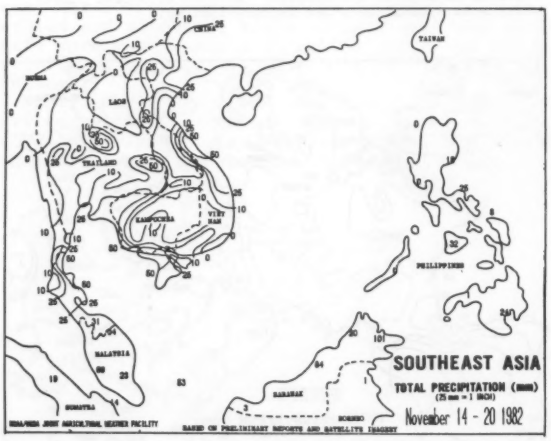
EUROPE...Wet weather continued over England, France, and northern Italy. Rainfall varied, but averaged around 25 mm, in many areas. The continued wet weather in these areas has saturated topsoils. In Spain, winter grain planting is normally well underway in many areas, and although this past week was dry, topsoil moisture is favorable for emergence and early growth of the winter grain crop. Highly beneficial precipitation fell on East Germany and Poland, mainly as rain. However, more rain is needed in these areas. Wet weather benefited winter grains in the southeast which continue to grow before dormancy. Weekly temperatures were near normal over the region.


SOUTH ASIA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
November 14 - 20 1982
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

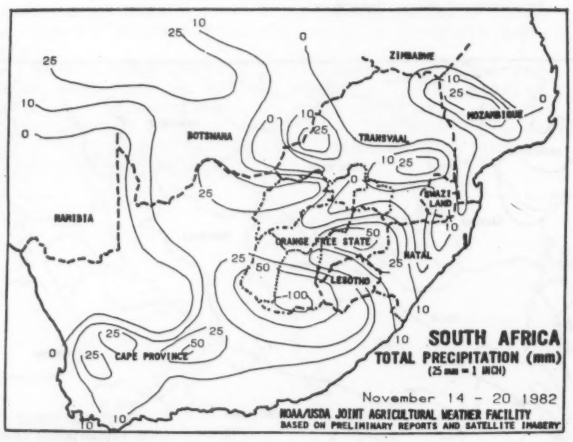
SOUTH ASIA...Generally dry weather covered most of the region during the week. Winter grain planting should be well underway in Punjab, Haryana, Uttar Pradesh, and Bihar. More rain is needed in nonirrigated winter grain areas to provide favorable topsoil moisture for emergence and early growth of the grain crop. The overall outlook for winter grains is favorable at this time. The dry weather enabled the harvest of cotton, groundnuts, and rice to progress with few delays.


EASTERN ASIA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
November 14 - 20 1982
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS

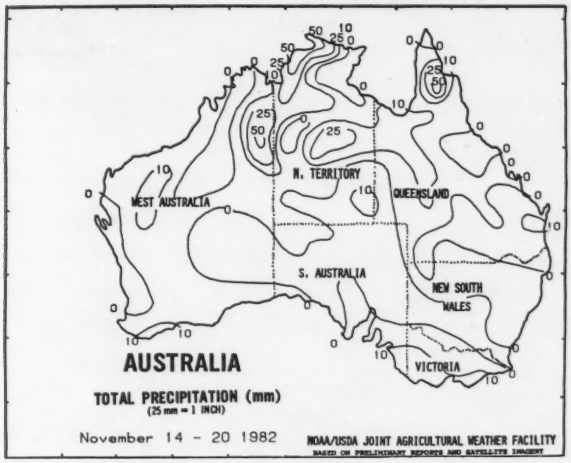
EASTERN ASIA...Most of the rain in China fell south of the Yangtze river early in the week, delaying the late rice harvest. However, dry weather followed, allowing the harvest pace to increase. Dry weather returned to winter grain areas in the North China Plain. Sowing prospects have been dimmed somewhat in those winter grain areas in Hebei and surrounding locations which are not irrigated. Weekly temperatures allowed continued plant growth in the North China Plain.


SOUTHEAST ASIA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
November 14 - 20 1982
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

SOUTHEAST ASIA...Scattered showers dotted much of Southeast Asia during the week. Much of the northern highlands and northeastern rice areas of Thailand missed significant rainfall except for a few isolated locations, but southeastern, western, and peninsula regions received moisture which aided rice development. Elsewhere, substantial rainfall covered some coastal areas of Kampuchea and Vietnam while Laos was mostly dry. Further south, rainfall was sporadic over Malaysia and Indonesia, leaving some areas with beneficial moisture for rice but continuing the general trend of below-average precipitation throughout the region.

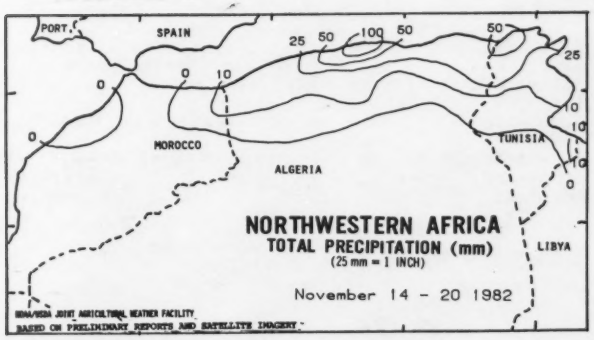

SOUTH AFRICA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
November 14 - 20 1982
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

SOUTH AFRICA...A storm system moved across the Maize Triangle, producing a variable rainfall pattern throughout the major corn-producing region. Locally heavy showers fell around the perimeter of the corn areas, while lighter rain sprinkled over the central portion. Topsoil moisture remains generally favorable for early corn growth, while planting continues throughout the central and western crop areas. Northeastern crop areas would benefit greatly from additional rainfall to moisten topsoils sufficiently for early growth. The early portion of the wet season has provided an optimistic start for summer crops thus far.



AUSTRALIA...Showers increased over northern areas; however, only light showers covered the critically dry eastern portions of the continent. Dry weather dominated Western Australia where the wheat harvest is underway. Harvesting has proceeded rapidly elsewhere in the wheat belt as the relentless drought continues. The warm, dry weather has provided good quality wheat with exceptionally high protein levels. However, the drought has drastically cut yields, most notably in dryland areas. Summer crops, including cotton, corn, and sorghum, in eastern crop areas must rely on limited irrigation supplies for early vegetative growth.

SOUTH AMERICA...Persistent heavy showers continued to impede harvesting of wheat and planting of soybeans from Rio Grande do Sul to Parana. The excessive moisture has considerably reduced both the yield and quality of the wheat crop, especially in southern Brazil. The impact on soybean planting is not substantial as yet; however, further delays which would push the bulk of planting into December will begin to affect yields adversely. About 40 percent of the soybeans in Rio Grande do Sul have been sown compared with 60 to 70 percent on the average. Showers in the northern crop areas of Argentina benefited cotton and sunflowers, while scattered showers dotted some of the newly planted corn areas. Wheat harvesting has begun with generally favorable weather conditions.



NORTHWESTERN AFRICA...Showers and thunderstorms covered crop areas of Algeria and Tunisia early in the week. Fair weather returned to these areas by week's end, allowing fieldwork for winter grain planting to resume. Dry weather returned to Morocco, allowing fieldwork for winter grain planting to proceed at a normal pace. Topsoil moisture should be adequate for emergence and early establishment of the grain crop. However, subsoil moisture appears limited, and timely rains will be required during the growing season to ensure favorable yield prospects.

MEXICO...Very light rain fell over the northwest and slightly benefited winter wheat and rangeland. Rain was too light to increase water in stock ponds. Cloudiness with spotty light rain and drizzle blanketed parts of the east coast as a frontal wave formed offshore. Heavy rains developed offshore but later moved into East Texas. The rest of the country was sunny and dry--ideal for harvesting but keeping soil moisture short.

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National Weather Summary (continued from front cover)

storm system intensified upon moving through the northwestern Plains, spreading snow and chilling winds in its wake. A trailing Pacific cold front with light showers triggered showers across southern California. Precipitation presisted across the Northwest.

SATURDAY . . . Wet weather covered about three quarters of the country as the intensifying storm pushed through the northern Plains. A combination of blustery winds, cold air, and snow behind the storm made an unpleasant day. East of the storm a flow of moist, warm air brought widespread rains and unseasonable warmth. Rains continued over the Pacific Northwest for the sixth consecutive day and over parts of the South for 5 consecutive days. The desert Southwest and central and southern Plains were generally sunny and dry.

Crop Production Highlights (continued from p. 2)

and seed record high production of 29.0 million tons (26.3 million metric tons) expected--up 6 percent from 1981 crop.

ALL TOBACCO production forecast at 1.94 billion pounds (879 thousand metric tons)--down 6 percent from 1981, up fractionally from last month.

PASTURE AND RANGE: Feed condition averaged 80 percent--equal to last year, but 5 points above 10-year average. Conditions declined seasonally in 27 States, unchanged in 3, improved in 18.

Scattered showers promoted grass growth in Texas, but low temperatures limited growth in north and central areas. High Plains wheat pastures providing limited grazing. Supplemental feeding required most areas. Dry weather limited fall growth in Oklahoma and southern Kansas. Early wheat seedings provided limited grazing. Rocky Mountain area received favorable moisture for good to excellent feed. Late October rains favorable for southern California and Arizona after earlier declining conditions. Scattered rainfall across eastern half of Nation produced conditions ranging from poor to excellent. Portions of Georgia, New Jersey, Ohio and Pennsylvania showed very poor pasture feed.

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